

California State University, San Bernardino

**CSUSB ScholarWorks**

---

Theses Digitization Project

John M. Pfau Library

---

2010

## **An interactive website for Disability Sports Festival based on ASP.NET**

Yuhe Li

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/etd-project>



Part of the [Databases and Information Systems Commons](#)

---

### **Recommended Citation**

Li, Yuhe, "An interactive website for Disability Sports Festival based on ASP.NET" (2010). *Theses Digitization Project*. 4451.

<https://scholarworks.lib.csusb.edu/etd-project/4451>

This Project is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact [scholarworks@csusb.edu](mailto:scholarworks@csusb.edu).

AN INTERACTIVE WEBSITE FOR DISABILITY SPORTS  
FESTIVAL BASED ON ASP.NET

---

A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science  
in  
Computer Science

---

by  
Yuhe Li  
June 2010

AN INTERACTIVE WEBSITE FOR DISABILITY SPORTS  
FESTIVAL BASED ON ASP.NET

---

A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

---

by

Yuhe Li

June 2010

Approved by:

[Redacted Signature]

Dr. Haiyan Qiao, Advisor,  
Computer Science and Engineering

[Redacted Signature]

Dr. Ernesto Gomez

[Redacted Signature]

Dr. Teng Lai Yu

6/10/2010

Date

## ABSTRACT

The Disability Sport Festival Website (DSFW) is a dynamic and extendable website used by the organizer of the Disability Sport Festival (DSF), sport participants and DSF supporters from the Inland Empire. DSFW provides sport participants and DSF supporters a user-friendly interface to view and register activities and programs or make donation to the organization throughout the year. DSFW also provides DSF administrators a secure and convenient platform for the management of a variety of activities and programs, registration and donation. DSFW is written in c# and built on the .NET framework, which provides Asp.net framework and Ajax technique to implement webpage and Ado.net framework to implement data access and communication between webpage and database. Therefore, it reduces the lines of code and builds an interactive website with high security and reliability.

In DSFW, the calendar of events displays the updated information about sports and physical activities throughout the year; online registration and form downloads are provided to the DSF participants and volunteers; slideshow of photos and video clips of disability sport festival enhance user experience from visual aspect; administrator

page makes system administration and maintenance easier and more efficient; integrating with Paypal makes the donation process more accurate, efficient and securer.

## TABLE OF CONTENTS

ABSTRACT . . . . .	iii
LIST OF TABLES . . . . .	x
LIST OF FIGURES . . . . .	xi
CHAPTER ONE: INTRODUCTION	
Background . . . . .	1
Purpose . . . . .	2
Project Scope . . . . .	3
Project Limitation . . . . .	4
Definitions, Acronyms, and Abbreviations . . . . .	5
CHAPTER TWO: ARCHITECTURE	
Project Design . . . . .	8
3-tier Architecture . . . . .	8
ADO.NET Architecture . . . . .	10
Ajax Extension . . . . .	13
The ScriptManager Control . . . . .	13
The UpdatePanel Control . . . . .	14
The ASP.NET AJAX Control Toolkit . . . . .	14
Product Perspective . . . . .	15
System Interfaces . . . . .	15
User Interfaces . . . . .	16
Software Interfaces . . . . .	16
Communication Interface . . . . .	17

Memory Constraints . . . . .	17
Site Adaptation Requirements . . . . .	17
Product Function . . . . .	18

CHAPTER THREE: DATABASE DESIGN

Introduction . . . . .	19
Database Specification . . . . .	20
Database Schema Logical Model- Relational Schema . . . . .	22
Database Design . . . . .	24
Applications Table . . . . .	26
Membership Table . . . . .	27
Paths Table . . . . .	28
PersonalizationAllUsers Table . . . . .	28
PersonalizationPerUser Table . . . . .	29
Profile Table . . . . .	29
Roles Table . . . . .	30
SchemaVersions Table . . . . .	30
Users Table . . . . .	31
UsersInRoles Table . . . . .	31
Sport_Register Table . . . . .	32
Volunteer_Register Table . . . . .	33

## CHAPTER FOUR: PROJECT IMPLEMENTATION

User Interface Design . . . . .	34
Account Interface . . . . .	35
Create Account Page . . . . .	35
Login Page . . . . .	36
Forgot Your Password Page . . . . .	37
Change Password Page . . . . .	38
Admin Interface . . . . .	39
Security Management Interface . . . . .	39
Calendar Management Interface . . . . .	46
Sport Participant Register Management Interface . . . . .	50
Volunteer Register Management Interface . . . . .	54
Disability Sports Festival Website User Interface . . . . .	58
Home Page . . . . .	58
Login Page . . . . .	59
Create Account Page . . . . .	60
Administrator Page . . . . .	61
Form Download Page . . . . .	62
Donation Page . . . . .	63
Calendar Page . . . . .	66
Activities Page . . . . .	70



Sport Participant Register Page . . . . .	71
Volunteer Page . . . . .	75
Volunteer Register Page . . . . .	76
Sponsors Page . . . . .	79
Photos Page . . . . .	81
Slideshow Page . . . . .	82
Coach Page . . . . .	83
Contact Us Page . . . . .	84
AJAX Page Integrated into ASP.NET Page . . . . .	85
Download ASP.NET AJAX Installer and Install . . . . .	85
Setting Up the ASP.NET AJAX Control Toolkit . . . . .	85
Modify the Web.config . . . . .	85
 CHAPTER FIVE: SOFTWARE TESTING	
Unit Testing . . . . .	87
System Testing . . . . .	92
System Integration Testing . . . . .	95
 CHAPTER SIX: MAINTENANCE MANUAL	
Operation System Installation . . . . .	96
Install the Windows Server 2003 . . . . .	96
Hardware Requirement . . . . .	97

IIS 6.0 Web Server Installing . . . . .	97
.NET 2.0 Framework Installing . . . . .	97
Set Up a ASP.NET Web Site with IIS . . . . .	97
Installing Microsoft AJAX . . . . .	102
Downloading and Installing MS Ajax Extensions . . . . .	102
Setting Up the ASP.NET AJAX Control Toolkit . . . . .	102
SQL Server 2005 Installation and Configuration . . . . .	102
Disability Sports Festival Website Installation . . . . .	105
SQL Data Import/Export . . . . .	105
Deployment and Configuration . . . . .	106
Windows Permissions . . . . .	107
CHAPTER SEVEN: CONCLUSION . . . . .	108
REFERENCES . . . . .	110

## LIST OF TABLES

Table 1.	Database Relational Schema . . . . .	22
Table 2.	Structure of Application . . . . .	26
Table 3.	Structure of Membership . . . . .	27
Table 4.	Structure of Paths . . . . .	28
Table 5.	Structure of PersonalizationAllUsers . . . . .	28
Table 6.	Structure of PersonalizationPerUser . . . . .	29
Table 7.	Structure of Profile . . . . .	29
Table 8.	Structure of Roles . . . . .	30
Table 9.	Structure of SchemaVersions . . . . .	30
Table 10.	Structure of Users . . . . .	31
Table 11.	Structure of UsersInRoles . . . . .	31
Table 12.	Structure of Sport_Register . . . . .	32
Table 13.	Structure of Volunteer_Register . . . . .	33
Table 14.	Unit Testing Results . . . . .	88
Table 15.	System Testing . . . . .	93
Table 16.	System Integration Testing . . . . .	95

LIST OF FIGURES

Figure 1.	The Illustration of the Processes among Layers in 3-tier Architecture of Disability Sports Festival . . . . .	10
Figure 2.	Connection to Database . . . . .	12
Figure 3.	ScriptManager Control Used in Slideshow Page . . . . .	14
Figure 4.	ASP.NET AJAX Control Toolkit Used in Slideshow Page . . . . .	15
Figure 5.	Deployment Diagram . . . . .	16
Figure 6.	Use Case Diagram . . . . .	18
Figure 7.	Web Configuration Connection String to SQL Server . . . . .	20
Figure 8.	Entity Relational Diagram . . . . .	21
Figure 9.	Web.config.xml File . . . . .	25
Figure 10.	Create Account Page . . . . .	35
Figure 11.	Login Page . . . . .	36
Figure 12.	Forgot Password Page . . . . .	37
Figure 13.	Password Change Page . . . . .	38
Figure 14.	Security Management Page . . . . .	39
Figure 15.	Access Method Page . . . . .	40
Figure 16.	Data Store Page . . . . .	41
Figure 17.	Defile Role Page . . . . .	42
Figure 18.	Add New Users Page . . . . .	43
Figure 19.	Add Access Rule Page . . . . .	44

Figure 20. App_Data Page . . . . .	45
Figure 21. Administrator Login Page . . . . .	46
Figure 22. Program Calendar . . . . .	47
Figure 23. Agenda Page . . . . .	48
Figure 24. Create Event Page . . . . .	49
Figure 25. Sport Participant Register Management Page . . . . .	50
Figure 26. Selecting Function Page . . . . .	51
Figure 27. Editing Page . . . . .	52
Figure 28. Sorting Page . . . . .	53
Figure 29. Volunteer Register Management Page . . . . .	54
Figure 30. Selecting Function . . . . .	55
Figure 31. Editing Page . . . . .	56
Figure 32. Sorting Page . . . . .	57
Figure 33. Home Page . . . . .	58
Figure 34. Login Page . . . . .	59
Figure 35. Create Account Page . . . . .	60
Figure 36. Administrator Page . . . . .	61
Figure 37. Form Download Page . . . . .	62
Figure 38. Donation Page . . . . .	63
Figure 39. Donation Page 2 . . . . .	64
Figure 40. Donation Page 3 . . . . .	65
Figure 41. Calendar Page . . . . .	66

Figure 42. Calendar Page 2 . . . . .	67
Figure 43. Calendar Page 3 . . . . .	68
Figure 44. Calendar Print Page . . . . .	69
Figure 45. Activities Page . . . . .	70
Figure 46. Sport Participant Register Page . . . . .	71
Figure 47. Sport Participant Register Page 2 . . . . .	72
Figure 48. Sport Participant Register Page 3 . . . . .	73
Figure 49. Sport Participant Register Page 4 . . . . .	74
Figure 50. Volunteer Page . . . . .	75
Figure 51. Volunteer Register Page 1 . . . . .	76
Figure 52. Volunteer Register Page 2 . . . . .	77
Figure 53. Volunteer Register Page 3 . . . . .	78
Figure 54. Sponsors Page . . . . .	79
Figure 55. Funding Form Download . . . . .	80
Figure 56. Video in Photo Page . . . . .	81
Figure 57. Slideshow Page . . . . .	82
Figure 58. Coach Page . . . . .	83
Figure 59. Contact Page . . . . .	84
Figure 60. Ajax-Enable Web.config . . . . .	86
Figure 61. Create a Virtual Directory . . . . .	98
Figure 62. Alias . . . . .	99
Figure 63. Path of the Directory . . . . .	100
Figure 64. Setting Permissions . . . . .	101

Figure 65. SQL Protection Page . . . . . 103

Figure 66. SQL Server Configuration . . . . . 104

Figure 67. Data Import and Export Page . . . . . 105

Figure 68. Copy Web Page . . . . . 106

Figure 69. Window Permission . . . . . 107

## CHAPTER ONE

### INTRODUCTION

#### Background

The Disability Sports Festival is a non-profit organization founded at California State University, San Bernardino in 2007. Its primary purpose is to promote physical activity and sports for people with disabilities and to raise awareness of disability sports and physical activity in the Inland Empire. In the first two years of the festival, over 300 athletes, 400 volunteers and a couple hundred more family, friends, and supporters have been involved with the festival. The DSF at CSUSB also hosts a number of different activities and programs that promote physical activity for people with disabilities throughout the year. In the third year, the number of participants was nearly doubled from previous year's 220 to more than 400 in the one-day free event held in and around the University's Coussoulis Arena.

In order to serve a significant number of people and encourage them to contribute to and collaborate with the festival, there is an urgent need to create a website that is dynamic, easy to maintain and update.



## Purpose

The current DSF website is static. It can only be updated by the webmaster or someone who is proficient in HTML or flash. Therefore, it is difficult for the program organizers to edit the contents of the website. In addition, with the growth of the DSF at Cal State San Bernardino, more and more people are involved in the event. Some of them want to support the festival, but donation online is not available at the current website. Other interactive functions such as form download, contact Page, online registration and Event calendar are all unavailable. A dynamic website is the most effective solution to interact with the participants and visitors. Furthermore, the current website doesn't support administrative interfaces. Although a dynamic website typically costs more in the short term because of its complexity, it can be a more cost effective solution in the long run. The purpose of this project is to re-structure, redesign and rewrite the old website to serve the desired need of DSF better.

In this new version DSF website, front platform management will include user register, online registration for activities, donation and form downloading; background management will realize functions such as registration

management, event calendar management and sports participant and volunteer information sorting, editing and deleting. In addition to provide regular festival information, the website also aims to provide an Interactive calendar that is easy to update the programs throughout the year, slideshow and video that display live scenes of DSF.

### Project Scope

DSF participants can view festival information and sport programs throughout the year, select the Programmes and register the festival online. DSF supporters can view festival information and donate or register as volunteers. DSF organizers can maintain festival programs and activity of DSF as well as manage participants and volunteers registration information through DSF website.

There are three intended users of the DSFW: DSF participants, DSF supporters and DSF organizers. The DSF has the following functions for its users:

- Registration
- Donation
- Forms download

must comply with the CSUSB Web page accessibility standards and guidelines.

### Definitions, Acronyms, and Abbreviations

The definitions, acronyms, and abbreviations used in the document are described in this section.

- DSWF: Disability Sports Festival Website
- DSF: Disability Sports Festival
- ASP.NET: ASP.NET is a web application framework developed and marketed by Microsoft to allow programmers to build dynamic web sites, web applications and web services. It was first released in January 2002 with version 1.0 of the .NET Framework, and is the successor to Microsoft's Active Server Pages (ASP) technology.
- ADO.NET: ADO.NET is a set of computer software components that programmers can use to access data and data services. It is a part of the base class library that is included with the Microsoft .NET Framework. It is commonly used by programmers to access and modify data stored in relational database systems, though it can also access data in non-relational sources. ADO.NET is sometimes considered an

- Interactive calendar
- Pictures slideshow
- Registration Management
- Program Management

For DSF participants, DSFW provides updated program information through interactive calendar, slideshow browsing, forms download, online registration and contact the organizers. Besides obtaining information about DSF, DSF supporters can donate online or register as volunteers. The DSF organizers have two available privileges: Manage participant and volunteer registration and maintain programs and activities through interactive calendar. Privileges are assigned to organizers depending upon their job duties. For the registration management privilege, organizer members can sort, delete and edit registration information. For programs and activities maintenance privilege, organizer members can sort, delete and edit programs and activities through the interactive calendar.

#### Project Limitation

The DSF is an official Web site that represents California State University, San Bernardino. Therefore, it

evolution of ActiveX Data Objects (ADO) technology, but was changed so extensively that it can be considered an entirely new product.

- SQL: often referred to as Structured Query Language, is a database computer language designed for managing data in relational database management systems (RDBMS), and originally based upon relational algebra.
- Ajax: Ajax (shorthand for asynchronous JavaScript and XML) is a group of interrelated web development techniques used on the client-side to create interactive web applications. With Ajax, web applications can retrieve data from the server asynchronously in the background without interfering with the display and behavior of the existing page.
- API: Application Program Interface is a set of routines that an application uses to request and carry out low-level services performed by a computer's operating system; also, a set of calling convention in programming that defines how a service is invoked through the application.

- CSUSB: California State University, San Bernardino.
- HTML: HyperText Markup Language is the authoring language used to create documents on the World Wide Web.
- J2EE: Java 2 Platform Enterprise Edition is a platform-independent, Java-centric environment from Sun Microsystems, Inc., for developing, building, and deploying Web-based enterprise applications online. The J2EE platform consists of a set of services, APIs, and protocols that provide the functionality for developing multitiered, Web-based applications.
- Paypal: Paypal is an e-commerce business allowing payments and money transfers to be made through the Internet. Paypal serves as an electronic alternative to traditional paper payment methods such as checks and money orders.
- IIS: Internet Information Services (IIS) - formerly called Internet Information Server - is a web server application and set of feature extension modules created by Microsoft for use with Microsoft Windows.

## CHAPTER TWO

### ARCHITECTURE

#### Project Design

The New DSFW implements a client-server Web-based system. The front-end pages and business-tier are written in c#. The whole project is built on .NET Framework, although Slideshow Ajax webpage is integrated with other ASP.NET webpages. In addition, ADO.NET provides database access to web applications (ASP.NET) through data providers in this projection. IIS is used as web server.

#### 3-tier Architecture

In 3-tier architecture, the program is organized into three major disjunctive tiers on layers as following:

- Application layer or Presentation layer. Application layer is the form which provides the user interface to either programmer or end user.
- Business layer. This layer is a class which used to write the function which works as a mediator to transfer the data from Application or presentation data layer.

- Data Access Layer. This layer is a class which used to get or set the data to the database back and forth. This layer only interacts with the database.

These three layers are response to their own obligation as well as communicated with other layer to implement functions of application.

- Application layer is the form where programmers design using the controls such as textbox, labels, command buttons etc.
- Business layer is the class where programmers write the functions which get the data from the application layer and passes data through the data access layer.
- Data layer is also the class which gets the data from the business layer and sends it to the database or gets the data from the database and sends it to the business layer.



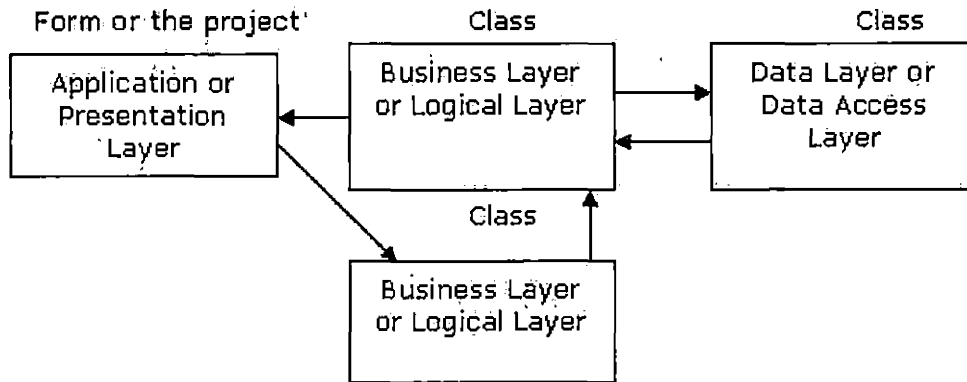


Fig.1 The Illustration of the Processes among Layers in 3-tier Architecture of Disability Sport Festival

#### ADO.NET Architecture

The DSFW project uses ADO.NET to provide communication between database and business layer through several key components.

- Application: Processes and calls that ADO.NET functions to submit SQL statements and retrieve results.
- DataSet: As in-memory cache of data which functions like a disconnected XML data cache. The DataSet provides XML and relational interfaces of the data.

- **DataReader:** This component provides a direct, read-only SQL interface to the backend. It is a component of the data provider.
- **ADO.NET Data Provider:** The provider connects an ADO.NET application to the backend data store. It comprises the Connection, Command, DataReader and DataAdapter objects and supplies connection information through the Connection object.

The following figure shows how DSFW connect to a database by using either a DataSet, a DataAdapter or a DataReader.

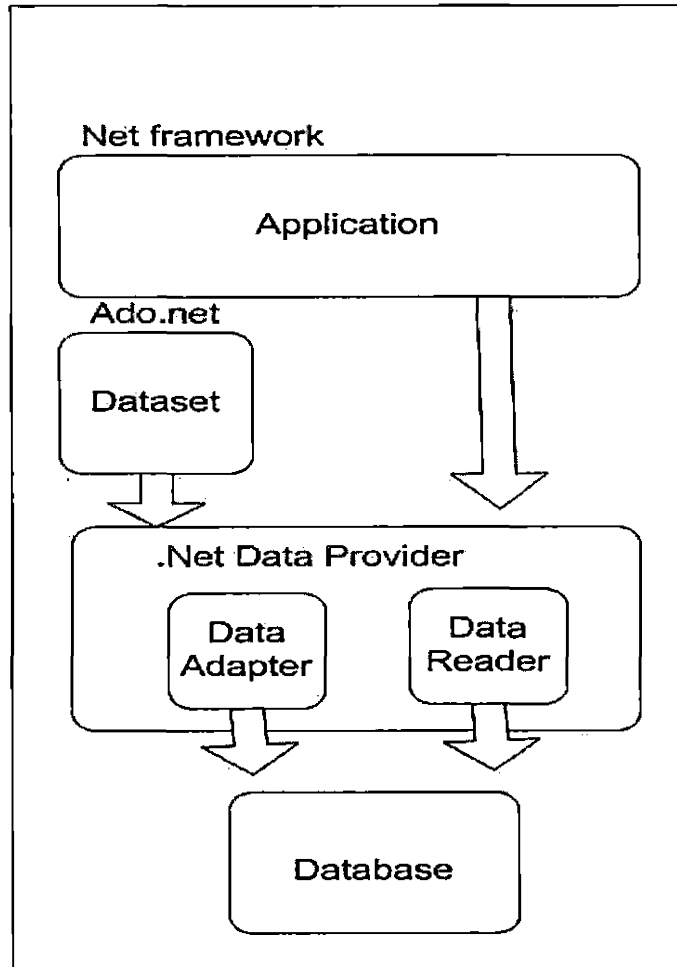


Fig.2 Connection to Database

In order to access the ADO.NET functionality, DSFW imports namespaces- `System.Data.SqlClient`, which includes all the functions needed to manipulate data from SQL Server. Objects include:

- `SqlConnection`
- `SqlCommand`

- DataSet
- SqlDataReader
- SqlDataAdapter

### Ajax Extension

AJAX allows web pages to be updated asynchronously by exchanging small amounts of data with the server behind the scenes. This means that it is possible to update parts of a web page, without reloading the whole page. In order to improve user's experience of getting the information that they needed, AJAX Extension is imported to implement Slideshow function in DSFW project. With the two controls provided by ASP.NET AJAX Framework and AJAX Control Toolkit supporting, DSFW implements Slideshow by extending abstract controller class and using AJAX Control Toolkit instead of directly writing the controller interfaces.

### The ScriptManager Control

This is a non-visual control for managing client scripts in AJAX pages. Including the ScriptManager control automatically adds the Type Extensions required by client scripts in order to use the library.

```

<asp:ScriptManager ID="ScriptManager1" runat="server" />
<br />

<h2 style="text-align: center"></h2>
<div style="text-align: center">

<script runat="Server" type="text/C#">
[System.Web.Services.WebMethod]
[System.Web.Script.Services.ScriptMethod]
public static AjaxControlToolkit.Slide[] GetSlides()
{
    AjaxControlToolkit.Slide[] slides = new AjaxControlToolkit.Slide[5];

    slides[0] = new AjaxControlToolkit.Slide("images/Blue hills.jpg", "B:
slides[1] = new AjaxControlToolkit.Slide("images/Sunset.jpg", "Sunset
slides[2] = new AjaxControlToolkit.Slide("images/Winter.jpg", "Winte:
slides[3] = new AjaxControlToolkit.Slide("images/Water lilies.jpg", '
slides[4] = new AjaxControlToolkit.Slide("images/VerticalPicture.jpg"
return(slides);
}

```

Fig.3 ScriptManager Control Used in Slideshow Page

### The UpdatePanel Control

The ScriptManager can be included with the UpdatePanel control to perform partial-page updates without the need for JavaScript Ajax calls. Whether or not a page participates in partial-page updates is determined by the EnablePartialRendering property of the ScriptManager control.

### The ASP.NET AJAX Control Toolkit

The ASP.NET AJAX Control Toolkit is a project for creating ASP.NET AJAX controls. Built on top of the Microsoft ASP.NET AJAX Framework, the Control Toolkit gives

you a great selection of controls and also gives you the ability to build your own controls from scratch.

```
Script runat="Server" type="text/C#">
System.Web.Services.WebMethod]
System.Web.Script.Services.ScriptMethod]
public static AjaxControlToolkit.Slide[] GetSlides()

    AjaxControlToolkit.Slide[] slides = new AjaxControlToolkit.Slide[5];

    slides[0] = new AjaxControlToolkit.Slide("images/Blue hills.jpg", "Blue Hills",
    slides[1] = new AjaxControlToolkit.Slide("images/Sunset.jpg", "Sunset", "Setting");
    slides[2] = new AjaxControlToolkit.Slide("images/Winter.jpg", "Winter", "Winter");
    slides[3] = new AjaxControlToolkit.Slide("images/Water lilies.jpg", "Water lilies", "Water lilies");
    slides[4] = new AjaxControlToolkit.Slide("images/VerticalPicture.jpg", "Sedona", "Sedona");
    return(slides);

```

Fig.4 ASP.NET AJAX Control Toolkit Used in Slideshow Page

### Product Perspective

The DSFW is currently being used by Disability Sports Festival Office to propagate Disability Sport Activity and manage the information. A performance improvement along with new website, made it more user-friendly, productive and stable.

### System Interfaces

The DSFW is currently being used by Disability Sports Festival Office to propagate Disability Sports Activity and manage the information. A performance improvement along with new website, made it more user-friendly, productive, and stable.

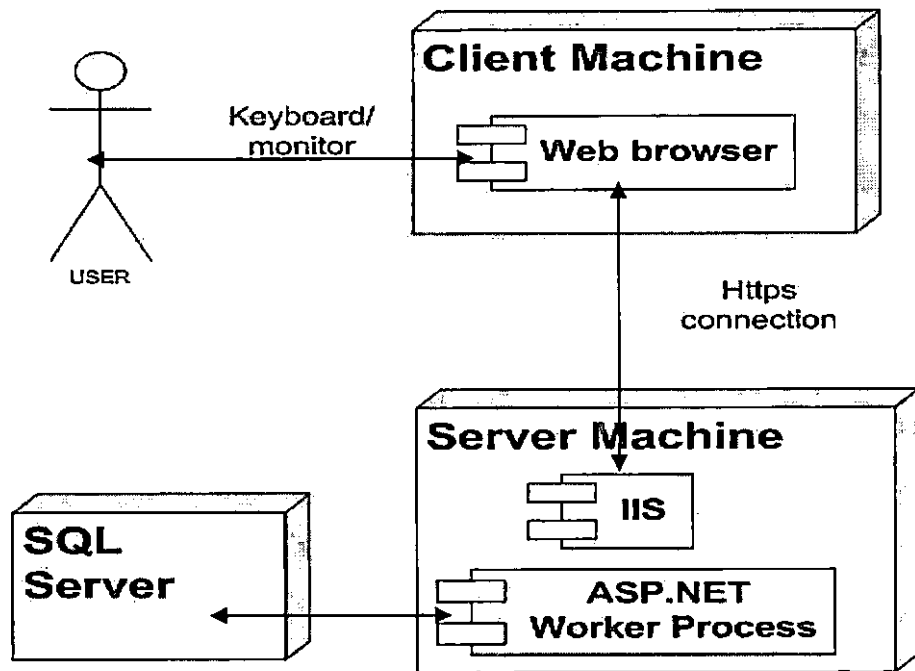


Fig.5 Deployment Diagram

### User Interfaces

The DSFW categorizes users into three major types: participant, supporter or administrator. All user interfaces, except participant and supporter, include a login interface page.

### Software Interfaces

The project software interface is viewed over the web.Asp.net which supports the most popular browsers:

- IE 6.0, IE 7.0, IE 8.0
- Firefox 1.0.5+
- Mozilla 1.7.1+

- Netscape 7.1+
- Opera 7.52+
- Safari or Firefox on Mac OS

The language and applications use to develop the project are Asp.net, Ado.net, c#, Ajax and CSS. IIS is the server on which the operating system is running.

#### Communication Interface

The DSFW uses .NET framework and the operating system to manage communication between the client and the server. The Ado.net framework handles the communication between the SQL database and business lever through Data Access Layer.

#### Memory Constraints

The minimum memory requirement for running the DSFW server is 325 MB. For the client machine, at least 256 MB is desired.

#### Site Adaptation Requirements

The DSFW does not have any specific site adaptation requirements but at least 1024 x 768 screen resolution is preferred.



Product Function

The following Figure 6. Show the users of the DSFW: system administrator, Sports participant, and the supporter of sports festival (volunteer, donator, others).

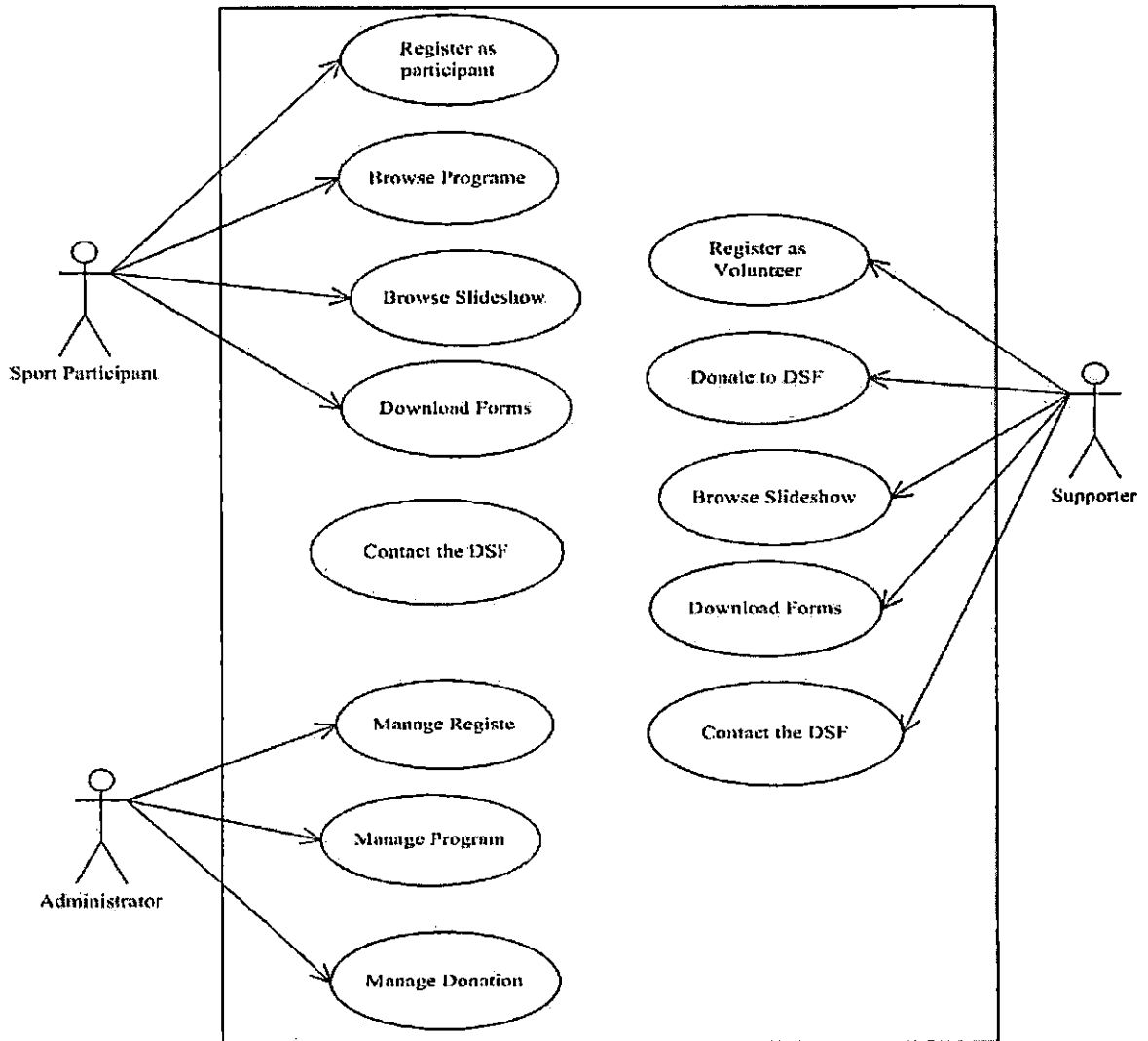


Fig.6 Use Case Diagram

## CHAPTER THREE

### DATABASE DESIGN

#### Introduction

DSFW implements the database solution through ADO.NET framework.

ADO.NET provides the bridge between databases, which is SQL, and ASP.NET application by using either a DataSet, a DataAdapter or a DataReader, rather than write and maintain an abundant of code to store and retrieve the data. Hence, the .NET framework assigns special namespace, System.Data.SqlClient, to SQL Server as data provider. System.Data.SqlClient uses objection of SqlConnection to connect with SQL database.

```

-----
\Windows\Microsoft.Net\Framework\v2.0.50727\Config
---->
|<configuration>
|  <appSettings/>
|  <connectionStrings>
|    <add name="aspnetdbConnectionString" connectionString="Data Source=YHLI-PC\SQLI
|      Initial Catalog=aspnetdb;User ID=sa;Password=00000000"
|      providerName="System.Data.SqlClient" />
|    <add name="aspnetdbConnectionString2" connectionString="Data
|      Source=YHLI-PC\SQLEXPRESS;Initial Catalog=aspnetdb;User ID=sa"
|      providerName="System.Data.SqlClient" />
|  </connectionStrings>
|  <system.web>
|    <!--
|      Set compilation debug="true" to insert debugging
|      symbols into the compiled page. Because this
|      affects performance, set this value to true only
|      during development.
|    -->
|    <compilation debug="true"/>
|    <!--

```

Fig.7 Web Configuration Connection String to SQL Sever

### Database Specification

DSFW includes two major categories of relational schema. One is the relational schema for accouter management system, the other is the relational schema provided for administrator to manage the registers information of volunteers and Sports participants. The Entity Relational (ER) diagram for the DSFW is shown in Figure 8.

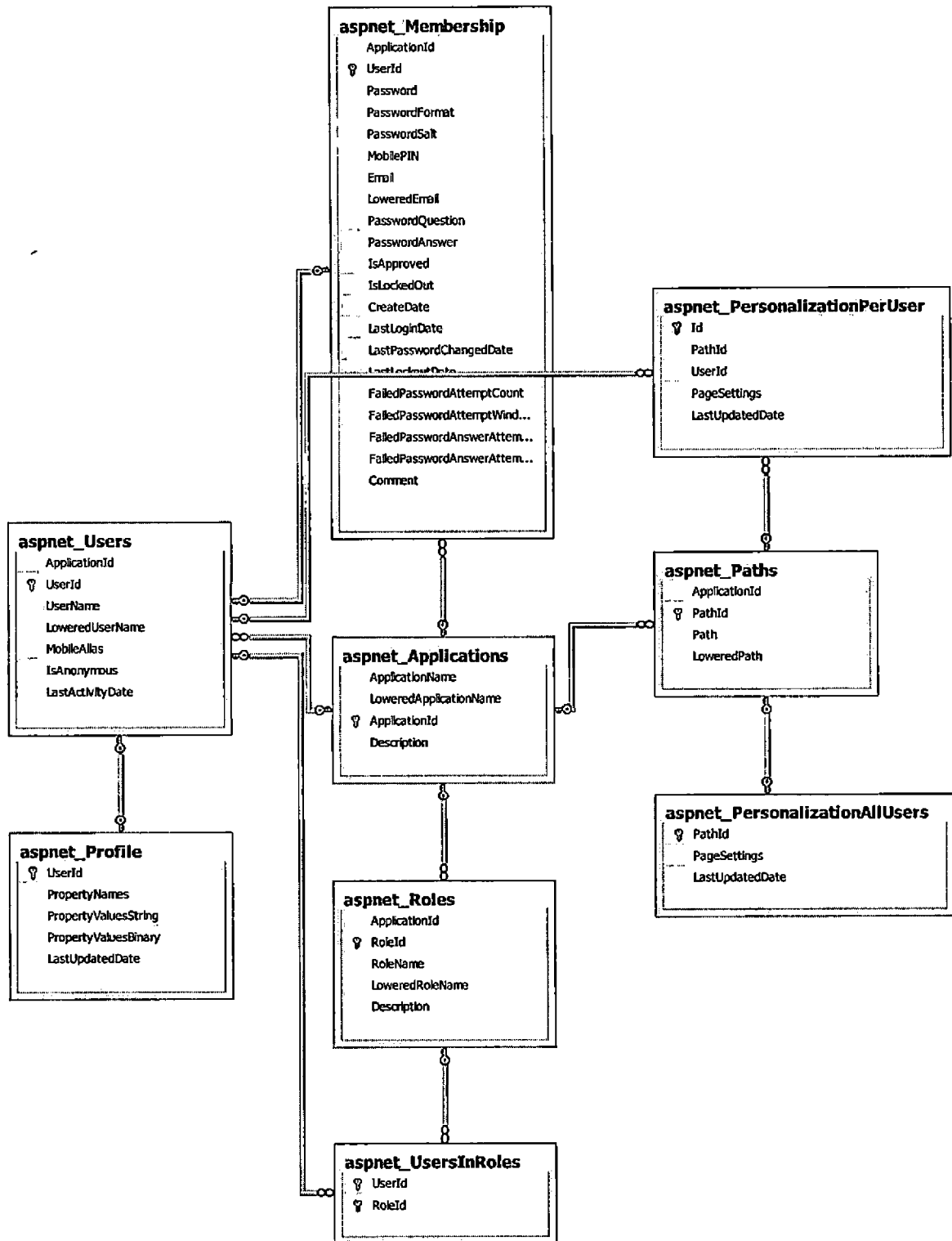


Fig.8 Entity Relational Diagram

## Database Schema Logical Model - Relational Schema

The database relational schema is shown in Table 1. The primary key for each table is underlined. Each cell in all the tables contains only one entry for each row, so the tables are already in 1NF form. There were no partial functional dependencies, so the tables are already in 2NF. There is no transitive dependency that involves the non-prime attributes of tables. Thus tables are in 3NF.

Table 1. Database Relational Schema

### Applications

<u>Application Id</u>	Lowered Application Name	Application Name	Description
-----------------------	--------------------------	------------------	-------------

### Membership

Application Id	<u>UserId</u>	Password	Password Format
MobilePIN	Email	LoweredEmail	Password Question
IsApproved	IsLockedOut	CreateDate	LastLogin Date
LastPassword ChangedDa	PasswordSalt	PasswordAnswer	
LastLock outDate	FailedPassword AttemptCount	Comment	

### Paths

Application Id	<u>PathId</u>	Path	Lowered Path
----------------	---------------	------	--------------

### PersonalizationAllUsers

<u>PathId</u>	PageSettings	LastUpdatedDate	
---------------	--------------	-----------------	--

PersonalizationPerUser

<u>Id</u>	PathId	UserId	PageSettings	Last Updated Date
-----------	--------	--------	--------------	-------------------

Profile

<u>User Id</u>	Property Names	PropertyValues String	PropertyValues Binary	Last UpdatedDate
----------------	----------------	-----------------------	-----------------------	------------------

Roles

<u>Application Id</u>	RoleId	RoleName	Lowered RoleName	Description
-----------------------	--------	----------	------------------	-------------

SchemaVersions

<u>Feature</u>	<u>Compatible SchemaVersion</u>	IsCurrentVersion
----------------	---------------------------------	------------------

Users

<u>Application Id</u>	<u>UserId</u>	UserName	LoweredUserName	MobileAlias
IsAnonymous				

UsersInRoles

UserId	RoleId
--------	--------

Sport Register

<u>ID</u>	[First Name]	[Last Name]	Age	Gender
Birthdate	Address	City	State	Zip
Phone Number	Email	Tshirt	Sports	DisAbility
Oth Disa	Disa Reason	Seizure	Sei Reason	Ename
Ephone				

Volunteer Register

ID	[First Name]	[Last Name]	Address	City
State	Zip	Phone	{Alternate Phone}	Doctor
DPhone	Parent	Mname	Mphone	Fname
Ephone	Relative	Relation	Rphone	Allergies
Tshot	Ainformation	Agree	Permission	

## Database Design

In the DSFW, Asp.net configuration creates tables for administration system account through the Web Site Administration Tool. Other tables including the sports participants and volunteers registers are designed according to the forms provided by DSF committee. As mentioned earlier, the DSFW uses Ado.net framework to handle connections between data and its application. Therefore, .net framework provides System.Web.XmlSiteMapProvider to establish the communication between account admin database and account admin application in the Web.config file. Table 3.is XML configuration file

```

    <appSettings/>
  ] <connectionStrings>
    <clear/>
    <add name="LocalSQLServer" connectionString="Server=YHLI-PC\SQLEXPRESS;
      Database=aspnetdb;Trusted_Connection=Yes;"/>
- </connectionStrings>

] <system.web>
] <siteMap defaultProvider="default">
] <providers>
  <clear/>
  <add name="default" type="System.Web.XmlSiteMapProvider"
    siteMapFile="web.sitemap" securityTrimmingEnabled="true"/>
- </providers>
- </siteMap>
] <!--
      Set compilation debug="true" to insert debugging
      symbols into the compiled page. Because this
      affects performance, set this value to true only
      during development.
- -->
] <authorization>
  <allow roles="admin"/>
- </authorization>
  <roleManager enabled="true"/>








```

Fig.9 Web.cfg.xml File



## Applications Table

Table 2. Structure of Application

Table - dbo.aspnet_Applications*		
Column Name	Data Type	Allow Nulls
ApplicationName	nvarchar(256)	
LoweredApplicationName	nvarchar(256)	
 ApplicationId	uniqueidentifier	
Description	nvarchar(256)	
		

Membership Table

Table 3. Structure of Membership

Table - dbo.aspnet_Membership			
	Column Name	Data Type	Allow Nulls
▶	ApplicationId	uniqueidentifier	<input type="checkbox"/>
?	UserId	uniqueidentifier	<input type="checkbox"/>
	Password	nvarchar(128)	<input type="checkbox"/>
	PasswordFormat	int	<input type="checkbox"/>
	PasswordSalt	nvarchar(128)	<input type="checkbox"/>
	MobilePIN	nvarchar(16)	<input checked="" type="checkbox"/>
	Email	nvarchar(256)	<input checked="" type="checkbox"/>
	LoweredEmail	nvarchar(256)	<input checked="" type="checkbox"/>
	PasswordQuestion	nvarchar(256)	<input checked="" type="checkbox"/>
	PasswordAnswer	nvarchar(128)	<input checked="" type="checkbox"/>
	IsApproved	bit	<input type="checkbox"/>
	IsLockedOut	bit	<input type="checkbox"/>
	CreateDate	datetime	<input type="checkbox"/>
	LastLoginDate	datetime	<input type="checkbox"/>
	LastPasswordChanged...	datetime	<input type="checkbox"/>
	LastLockoutDate	datetime	<input type="checkbox"/>
	FailedPasswordAttemp...	int	<input type="checkbox"/>
	FailedPasswordAttemp...	datetime	<input type="checkbox"/>
	FailedPasswordAnsw...	int	<input type="checkbox"/>
	FailedPasswordAnsw...	datetime	<input type="checkbox"/>
	Comment	ntext	<input checked="" type="checkbox"/>

Paths Table

Table 4. Structure of Paths

Table - dbo.aspnet_Paths		
Column Name	Data Type	Allow Nulls
▶ ApplicationId	uniqueidentifier	<input type="checkbox"/>
🔑 PathId	uniqueidentifier	<input type="checkbox"/>
Path	nvarchar(256)	<input type="checkbox"/>
LoweredPath	nvarchar(256)	<input type="checkbox"/>
		<input type="checkbox"/>

PersonalizationAllUsers Table

Table 5. Structure of PersonalizationAllUsers

Table - dbo.aspnet...nalizationAllUsers		
Column Name	Data Type	Allow Nulls
▶🔑 PathId	uniqueidentifier	<input type="checkbox"/>
PageSettings	image	<input type="checkbox"/>
LastUpdatedDate	datetime	<input type="checkbox"/>
		<input type="checkbox"/>

PersonalizationPerUser Table

Table 6. Structure of PersonalizationPerUser

Table - dbo.aspnet_PersonalizationPerUser			
	Column Name	Data Type	Allow Nulls
	Id	uniqueidentifier	<input type="checkbox"/>
	PathId	uniqueidentifier	<input checked="" type="checkbox"/>
	UserId	uniqueidentifier	<input checked="" type="checkbox"/>
	PageSettings	image	<input type="checkbox"/>
	LastUpdatedDate	datetime	<input type="checkbox"/>
			<input type="checkbox"/>

Profile Table

Table 7. Structure of Profile

Table - dbo.aspnet_Profile			
	Column Name	Data Type	Allow Nulls
	UserId	uniqueidentifier	<input type="checkbox"/>
	PropertyNames	ntext	<input type="checkbox"/>
	PropertyValuesString	ntext	<input type="checkbox"/>
	PropertyValuesBinary	image	<input type="checkbox"/>
	LastUpdatedDate	datetime	<input type="checkbox"/>
			<input type="checkbox"/>

## Roles Table

Table 8. Structure of Roles

Table - dbo.aspnet_Roles			
	Column Name	Data Type	Allow Nulls
▶	ApplicationId	uniqueidentifier	<input type="checkbox"/>
🔑	RoleId	uniqueidentifier	<input type="checkbox"/>
	RoleName	nvarchar(256)	<input type="checkbox"/>
	LoweredRoleName	nvarchar(256)	<input type="checkbox"/>
	Description	nvarchar(256)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

## SchemaVersions Table

Table 9. Structure of SchemaVersions

Table - dbo.aspnet_SchemaVersions			
	Column Name	Data Type	Allow Nulls
▶🔑	Feature	nvarchar(128)	<input type="checkbox"/>
🔑	CompatibleSchemaVer...	nvarchar(128)	<input type="checkbox"/>
	IsCurrentVersion	bit	<input type="checkbox"/>
			<input type="checkbox"/>

## Users Table

Table 10. Structure of Users

Table - dbo.aspnet_Users			
Column Name	Data Type	Allow Nulls	
▶ ApplicationId	uniqueidentifier	<input type="checkbox"/>	
🔑 UserId	uniqueidentifier	<input type="checkbox"/>	
UserName	nvarchar(256)	<input type="checkbox"/>	
LoweredUserName	nvarchar(256)	<input type="checkbox"/>	
MobileAlias	nvarchar(16)	<input checked="" type="checkbox"/>	
IsAnonymous	bit	<input type="checkbox"/>	
LastActivityDate	datetime	<input type="checkbox"/>	
		<input type="checkbox"/>	

## UsersInRoles Table

Table 11. Structure of UsersInRoles

Table - dbo.aspnet_Roles			
Column Name	Data Type	Allow Nulls	
▶ ApplicationId	uniqueidentifier	<input type="checkbox"/>	
🔑 RoleId	uniqueidentifier	<input type="checkbox"/>	
RoleName	nvarchar(256)	<input type="checkbox"/>	
LoweredRoleName	nvarchar(256)	<input type="checkbox"/>	
Description	nvarchar(256)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

Sport Register Table

Table 12. Structure of Sport\_Register

Table - dbo.Sport_Register			
	Column Name	Data Type	Allow Nulls
▶	ID	int	<input type="checkbox"/>
	[First Name]	nvarchar(50)	<input type="checkbox"/>
	[Last Name]	nvarchar(50)	<input type="checkbox"/>
	Age	nvarchar(50)	<input checked="" type="checkbox"/>
	Gender	nvarchar(50)	<input checked="" type="checkbox"/>
	Birthdate	smalldatetime	<input type="checkbox"/>
	Address	nvarchar(50)	<input type="checkbox"/>
	City	nvarchar(50)	<input type="checkbox"/>
	State	nvarchar(50)	<input type="checkbox"/>
	Zip	int	<input type="checkbox"/>
	PhoneNumber	varchar(50)	<input type="checkbox"/>
	Email	nvarchar(50)	<input type="checkbox"/>
	Tshirt	nchar(10)	<input checked="" type="checkbox"/>
	Sports	text	<input checked="" type="checkbox"/>
	DisAbility	text	<input checked="" type="checkbox"/>
	Oth_Disability	nvarchar(50)	<input checked="" type="checkbox"/>
	Disability_Reason	text	<input checked="" type="checkbox"/>
	Seizure	nchar(10)	<input checked="" type="checkbox"/>
	Seizure_Reason	text	<input checked="" type="checkbox"/>
	Ename	nvarchar(50)	<input checked="" type="checkbox"/>
	Ephone	varchar(50)	<input checked="" type="checkbox"/>

Volunteer Register Table

Table 13. Structure of Volunteer\_Register

Table - dbo.Volunteer_Register		
Column Name	Data Type	Allow Nulls
ID	int	<input type="checkbox"/>
[First Name]	nvarchar(50)	<input type="checkbox"/>
[Last Name]	nvarchar(50)	<input type="checkbox"/>
Address	nvarchar(50)	<input type="checkbox"/>
City	nvarchar(50)	<input type="checkbox"/>
State	nvarchar(50)	<input type="checkbox"/>
Zip	int	<input type="checkbox"/>
Phone	nvarchar(50)	<input checked="" type="checkbox"/>
[Alternate Phone]	nvarchar(50)	<input checked="" type="checkbox"/>
Doctor	nvarchar(50)	<input checked="" type="checkbox"/>
DPhone	nvarchar(50)	<input checked="" type="checkbox"/>
Parent	nvarchar(50)	<input checked="" type="checkbox"/>
Mname	nvarchar(50)	<input checked="" type="checkbox"/>
Mphone	nvarchar(50)	<input checked="" type="checkbox"/>
Fname	nvarchar(50)	<input checked="" type="checkbox"/>
Fphone	nvarchar(50)	<input checked="" type="checkbox"/>
Relative	nvarchar(50)	<input checked="" type="checkbox"/>
Relation	nvarchar(50)	<input checked="" type="checkbox"/>
Rphone	nvarchar(50)	<input checked="" type="checkbox"/>
Allergies	nvarchar(MAX)	<input checked="" type="checkbox"/>
Tshot	nvarchar(50)	<input checked="" type="checkbox"/>
Ainformation	text	<input checked="" type="checkbox"/>
Agree	nchar(10)	<input checked="" type="checkbox"/>
Permission	nvarchar(MAX)	<input checked="" type="checkbox"/>



CHAPTER FOUR  
PROJECT IMPLEMENTATION

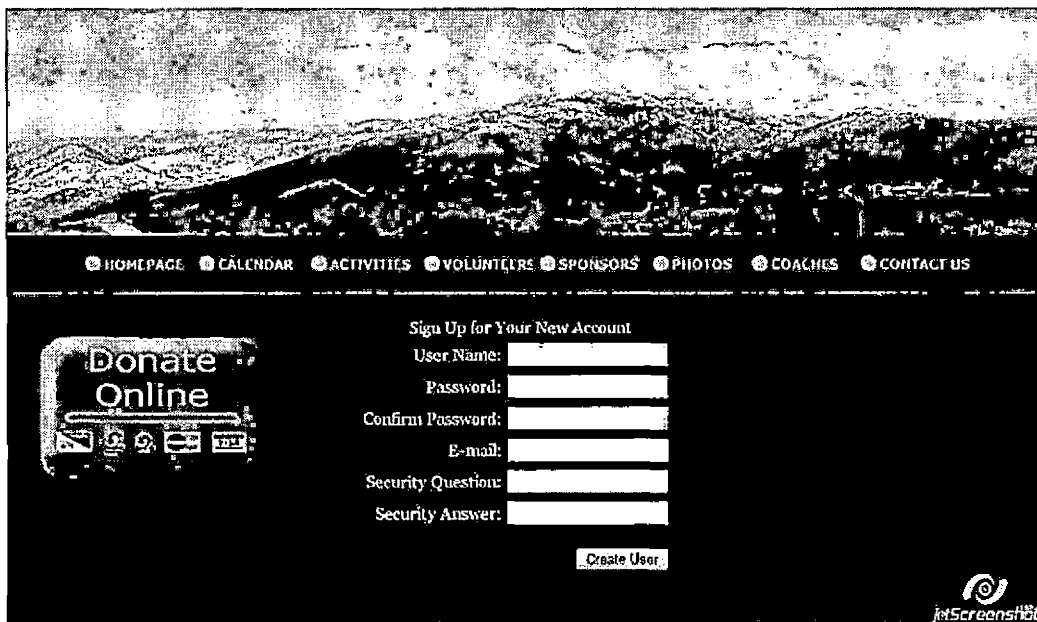
User Interface Design

The DSFW is a pure Web-based application programmed with Asp.net.

Asp.net supports the most popular browsers: Internet Explorer 6, Firefox, Google Chrome, etc. Therefore the user interfaces of DSFW support most popular web browsers and can be accessed by all kinds of users. All interfaces are generated dynamically on the server side and can fully or partially update the client pages, giving a good users experience of surfing on the webside.

## Account Interface

Create Account Page. This page is designed to create an account for a user who is interested in DSF but doesn't have an account yet. The username has to be unique and there is no length limit. The E-mail field has to be a valid e-mail address (Figure 10).



Sign Up for Your New Account

User Name:

Password:

Confirm Password:

E-mail:

Security Question:

Security Answer:

Fig.10 Create Account Page

Login Page. This page provides both administrator and user logins. Whether it is of a user or administrator depends on the role assigned to different users by super administrator who has the security management power (Figure 11).

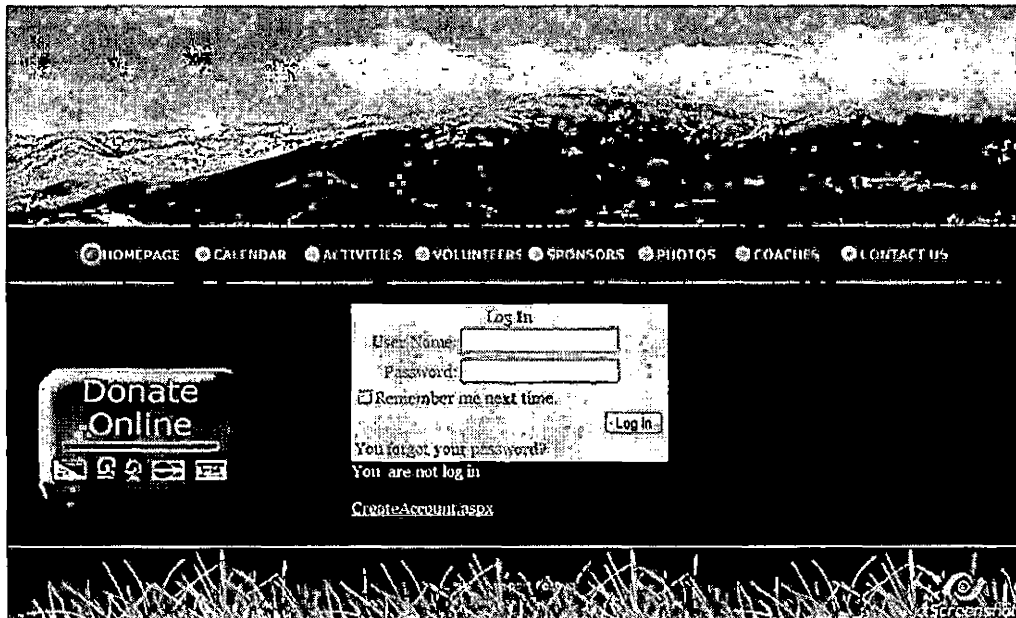


Fig.11 Login Page

Forgot Your Password Page. If users forget their passwords, by providing user ID in this page and they will retrieve their password through the email automatically send by the system (Figure 12).

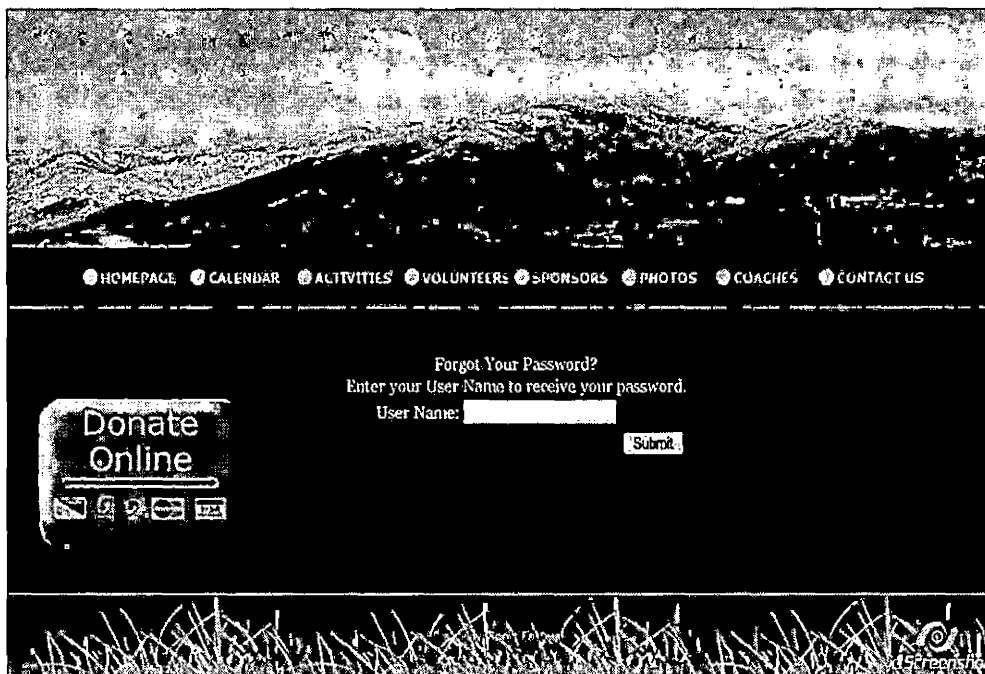


Fig.12 Forgot Password Page

Change Password Page. In this page users can change their passwords after they successfully login (Figure 13).

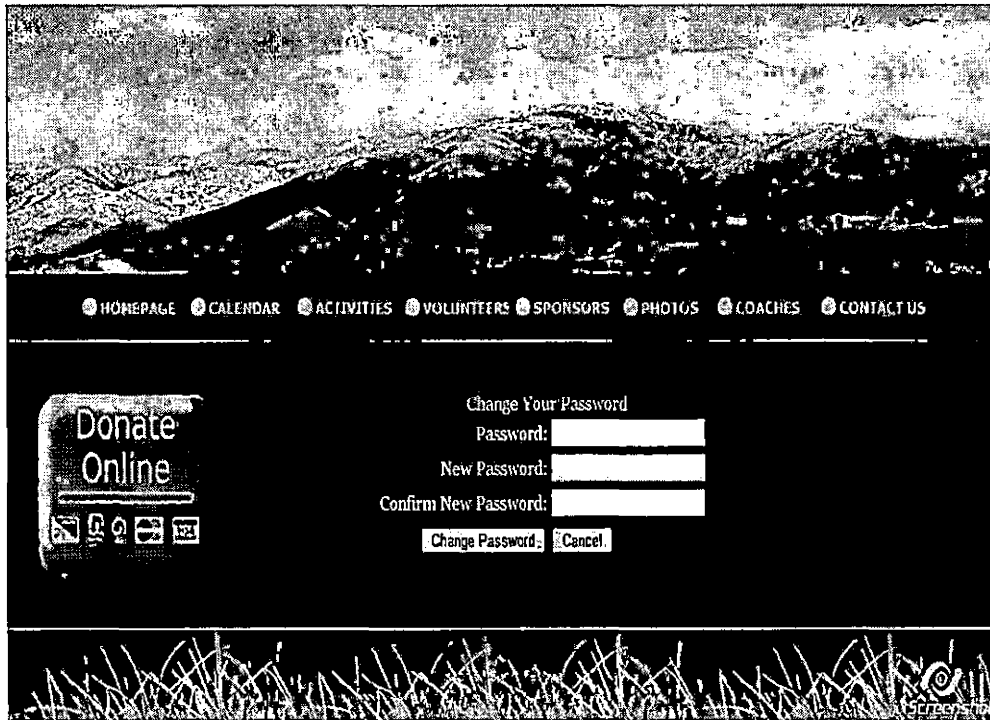


Fig.13 Password Change Page

## Admin Interface

Security Management Interface. The .net framework has provided Web Site Administration Tool in Asp.net configuration to manage all the security settings for DSFW application. From setting up users and passwords (authentication), creating roles (groups of users), to creating permissions (rules for controlling access to parts of your application), all that administrator need to do is to follow the steps designed to speed up their jobs(Figure 14) .

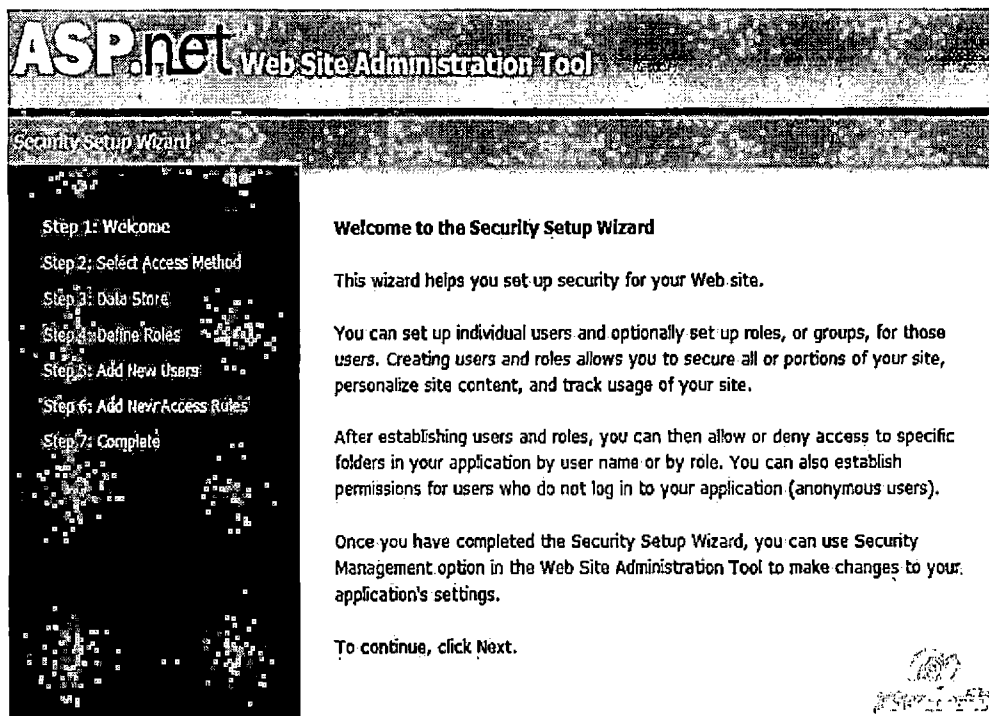


Fig.14 Security Management Page

- Step 1: Welcome
- Step 2: Select Access Method.DSFW is a public site available to anyone on the Internet, therefore the selection of access method is "from the internet".

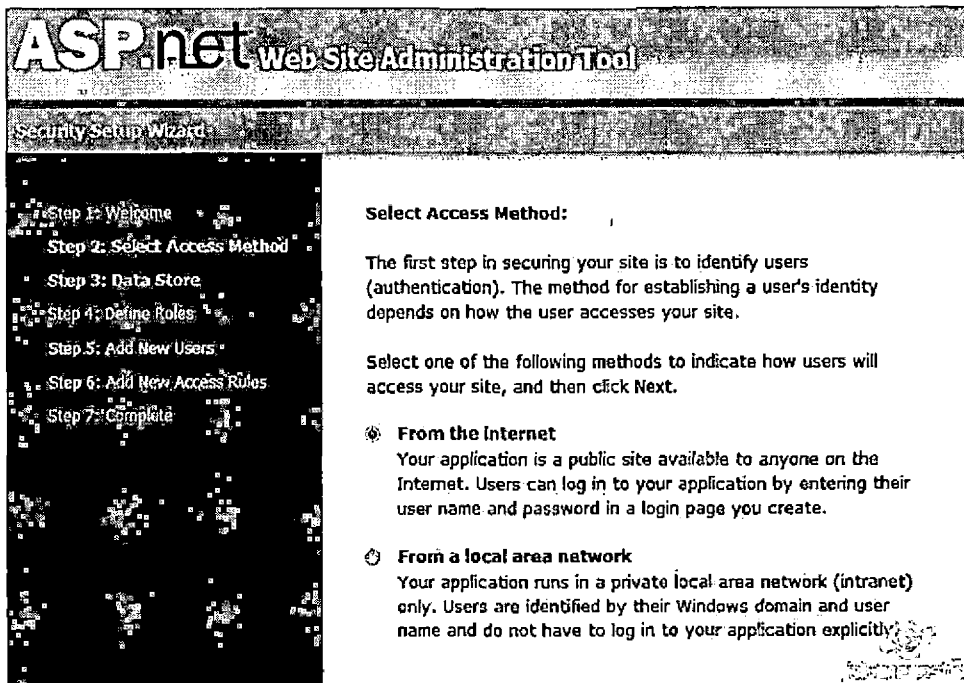


Fig.15 Access Method Page

- Step 3: Data Store.DSFW configure to use advanced provider settings and the admin data stores in tables of the aspnetdb database in SQL.

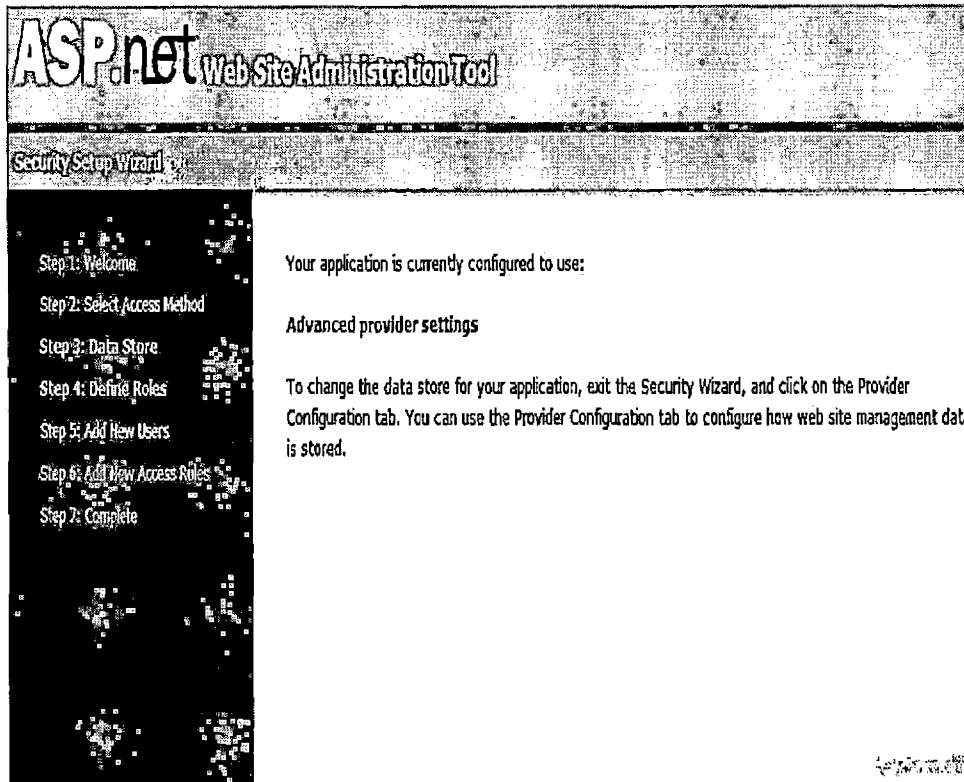


Fig.16 Data Store Page



- Step 4: Define Role. There are only two kinds of roles in the DSFW. One is administrator, the other is user. The privilege of this administration tool provides role management to administrators. Hence administrator can create the roles each with different access to special folders. In DSFW, an administrator has privileges to access the folder of admin containing manage pages.

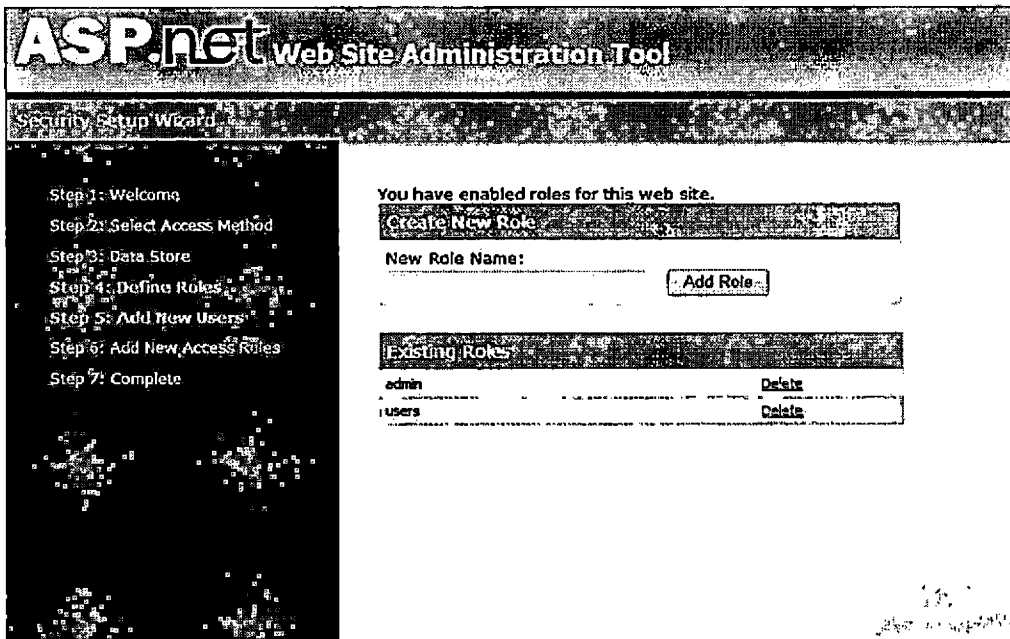


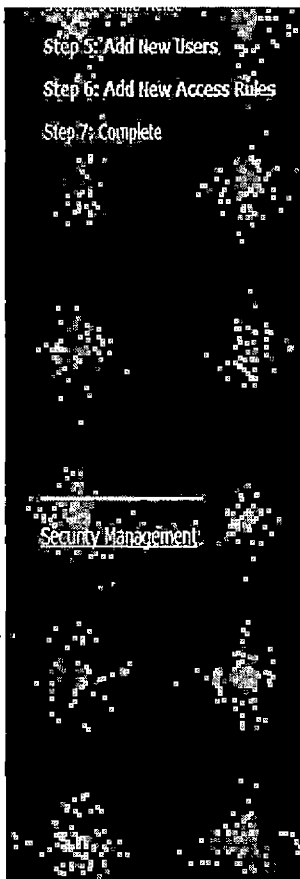
Fig.17 Define Role Page

- Step 5: Add New Users. Add a user by entering the user's ID, password, and e-mail on this page. You can also specify a question with an answer that the user must give when resetting a password or requesting a forgotten password.

The screenshot shows the 'ASP.net Web Site Administration Tool' interface. At the top, it says 'Security Setup Wizard'. On the left, a vertical list of steps is shown: Step 1: Welcome, Step 2: Select Access Method, Step 3: Data Store, Step 4: Define Roles, Step 5: Add New Users (highlighted), Step 6: Add New Access Rules, and Step 7: Complete. The main content area contains the following text: 'Add a user by entering the user's ID, password, and e-mail on this page. You can also specify a question with an answer that the user must give when resetting a password or requesting a forgotten password.' Below this is a 'Create User' button. The form fields are: 'Sign Up for Your New Account', 'User Name: \_\_\_\_\_', 'Password: \_\_\_\_\_', 'Confirm Password: \_\_\_\_\_', 'E-mail: \_\_\_\_\_', 'Security Question: \_\_\_\_\_', and 'Security Answer: \_\_\_\_\_'. At the bottom right is a 'Create User' button. At the bottom left is a checkbox labeled 'Active User' which is checked.

Fig.18 Add New Users Page

- Step 6: Add New Access Rules. Administrator can optionally add access rules to control access to the whole Web site or to individual folders. DSWF give users the permission to access all parts of the website except the folder of Administration.



To add a new access rule, select the site name or a folder to set a rule for. Then select the users or roles the rule applies to and select Allow or Deny.

If you define multiple rules, they are applied in the order shown in the table. The first rule that matches applies. You will be able to add, remove, modify, and reorder your rules later.

**Add New Access Rule**

Select a directory for this rule:

- Sport festival2

Rule applies to:

- Role admin
- User
- All Users
- Anonymous Users

Permission:

- Allow
- Deny

[Search for users](#)

Rules that appear dimmed are inherited from the parent and cannot be changed at this level

Permission	Users And Roles	Delete
Allow	admin	Delete
Allow		Delete

Fig 19 Add Access Rule Page

In order to prevent all users except administrator in accessing the fold of Admin, it needs to add the web configuration xml file in App\_Data (Figure 20).

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <system.web>
    <authorization>
      <allow roles="Admin" />
      <deny users="*" />
    </authorization>
  </system.web>
</configuration>
```

Fig.20 App\_Data Page

## Calendar Management Interface.

- Login Page. Administrator use the account created for DSFW calendar admin to login.

---

### Google calendar

#### Organize your schedule and share events with friends

With Google's free online calendar, it's easy to keep track of life's important events all in one place.



##### Share your schedule

Let your family and friends see your calendar, and view schedules that others have shared with you.



##### Get your calendar on the go

Access your calendar from your phone using its built-in calendar or mobile browser.



##### Never forget another event

Get event reminders via email or have text messages sent right to your mobile phone.

[Learn more about Google Calendar.](#)

Sign in to Google Calendar with your

Google Account

Email:

Password:

Stay signed in

[Can't access your account?](#)

New to Google Calendar?  
It's easy to start.

---

©2010 Google - [Google Calendar for Organizations](#) - [Privacy Policy](#) - [Program Policies](#) - [Terms of Use](#)

Fig.21 Administrator Login Page

- Calendar Management Page. In this page, administrator can add, edit and delete the programs of DSF through the whole year. In addition, the program can be specific to the day, week or month. (Figure 22)

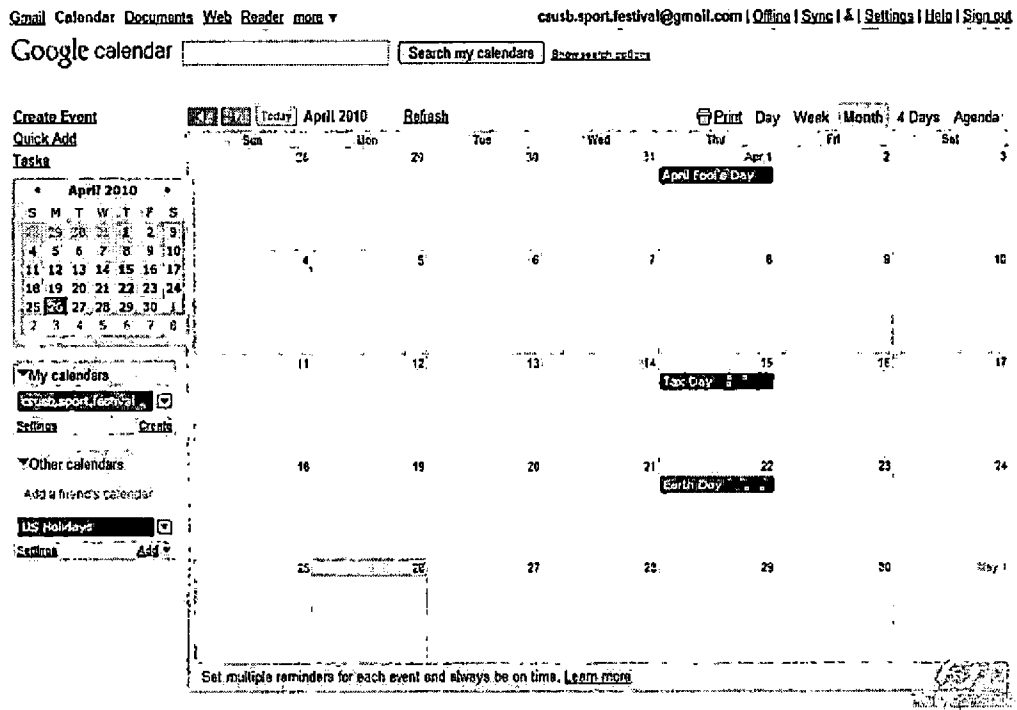


Fig.22 Program Calendar

- Agenda. The programs also can be search out in agenda page (Figure 23).

Gmail Calendar Documents Web Reader more v csusb.sport.festival@gmail.com | [Offline](#) | [Sync](#) | [Settings](#) | [Help](#) | [Sign out](#)

Google calendar   [Show search options](#)

[Create Event](#) [Quick Add](#) [Tasks](#) [Today](#) [Friday, Dec 31, 2010](#) [Refresh](#) [Print](#) [Day](#) [Week](#) [Month](#) [4 Days](#) [Agenda](#)

Expand All Collapse All

S	M	T	W	T	F	S
29	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

▼ My calendars

- csusb.sport.festival

▼ Other calendars

- US holidays

Sun Nov 7 Daylight Saving Time Ends

Thu Nov 11 Veterans Day

Thu Nov 25 Thanksgiving

Fri Dec 24 Christmas Eve

Sat Dec 25 Christmas

Fri Dec 31 New Year's Eve

Showing events until 2/17/2011. [Look for more](#)

Fig.23 Agenda Page

- Create Event Page. Administrator can create a program event of DSF with necessary information, such as what, when and where about event.

[Gmail](#) [Calendar](#) [Documents](#) [Web Reader](#) [more v](#) csusb.sport.festival@gmail

**Google calendar**   [Show search options](#)

**Create Event**

**Quick Add**

**Tasks**

• December 2010 •

S	N	T	W	T	F	S
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

My calendars: [csusb.sport.festival](#)

Other calendars: [US Holidays](#)

Add a friend's calendar

**Options**

**What**

**When**   to    All day

**Repeats:** Does not repeat

**Where**

**Calendar:** csusb.sport.festival@gmail.c

**Description**

Fig.24 Create Event Page



Sport Participant Register Management Interface.

- Sport Participant Register Management Page. This page displays all the information retrieved from participant register table store in SQL. The administrator can manipulate the information by selecting, editing, deleting and sorting.

	<u>First Name</u>	<u>Last Name</u>	<u>Age</u>	<u>Gender</u>	<u>PhoneNumber</u>	<u>Zip</u>	<u>State</u>	<u>City</u>	<u>Address</u>	<u>Birthdate</u>	<u>Email</u>
<a href="#">Edit</a> <a href="#">Delete</a>	hgjh	Jery	76	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	hjjkk@124.co
<a href="#">Edit</a> <a href="#">Delete</a>	hdjk	jkk	23	Female	(987) 765-0987	78899	cs	fhasjfa	fjlajflds	07/23/2009	nfdkl@123.do
<a href="#">Edit</a> <a href="#">Delete</a>	jkkk	ki	87	Male	(876) 987-7654	987	hhhh	jijklkl	hfoisah	12/09/1998	hjkj@tghgh.co
<a href="#">Edit</a> <a href="#">Delete</a>	yu	kj	98	Female	(987) 123-0987	98765	yui	hjkk	hjj@123.com	12/23/2008	hjkn@124.com
<a href="#">Edit</a> <a href="#">Delete</a>	hgjh	Mary	76	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	hjjkk@124.co
<a href="#">Edit</a> <a href="#">Delete</a>	Kala	Tee	76	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	hjjkk@124.co
<a href="#">Edit</a> <a href="#">Delete</a>	Kala	Tee	76	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	hjjkk@124.co

Fig.25 Sport Participant Register Management Page

- Selecting Function. It is easy for administrator to follow the row of information which has been selected and checked since it is a long row of information in this page.

	First Name	Last Name	Age	Gender	Phone Number	Zip	State	City	Address	Birthdate	
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hgjh	Jery	15	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	<a href="#">hjjkk@</a>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	wuwu	Tee	21	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	<a href="#">hjjkk@</a>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hjjk	jjk	23	Female	(987) 765-0987	78899	es	masjfa	flajfde	07/23/2009	<a href="#">njjkk@</a>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	yu	kj	29	Female	(987) 123-0987	98765	yui	hjjk	<a href="#">hjj@123.com</a>	12/23/2008	<a href="#">hjjkn@</a>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	Kala	Tee	32	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	<a href="#">hjjkk@</a>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	jkklk	ki	35	Male	(876) 987-7654	987	hhhhh	jjjjkklll	hfoisah	12/09/1998	<a href="#">hjjk@</a>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	Kala	Tee	49	Male	(765) 987-0987	87654	hj	hfkdsal	hdhfajkls	01/01/1900	<a href="#">hjjkk@</a>

Fig.26 Selecting Function Page

- **Deleting Function.** Click the delete hyperlink of the row and it will be deleted.
- **Editing Function.** Click the edit hyperlink of the row in which administrator want to edit and change the information as desired, but be careful about the format requirement per column, otherwise the database will reject the change if the format is not correct.

Email	Tshirt	Event_Categories	DisAbility:	Oth_Disa	Disa_Reason
hjjk@124.com	L	Goal Ball	Intellectual Disability (i.e. Down Syndrome)	Other Medical Conditions:	uyioik
hjk@124.com	YL	Goal Ball	Autism	Other Medical Conditions:	jjklk
hjk@ghgh.com	S	Goal Ball	Traumatic Brain Injury	Other Medical Conditions:	jjhklk
nfdk@123.dok	M	Goal Ball		Other Medical Conditions:	
hjjk@124.com	L	Goal Ball	Intellectual Disability (i.e. Down Syndrome)	Other Medical Conditions:	uyioik
hjjk@124.com	L	Goal Ball	Intellectual Disability (i.e. Down Syndrome)	Other Medical Conditions:	uyioik
hjjk@124.com	L	Goal Ball	Intellectual Disability (i.e. Down Syndrome)	Other Medical Conditions:	uyioik
hjjk@124.com	L	Goal Ball	Intellectual Disability (i.e. Down Syndrome)	Other Medical Conditions:	uyioik

Fig.27 Editing Page

- **Sorting Function.** Click the head of each column, the information of the whole table will be sorted in the order of that column. For example, click "Age" and the information in the whole table will be sorted in the order of age.

	<u>First Name</u>	<u>Last Name</u>	<u>Age</u>	<u>Gender</u>	<u>PhoneNumber</u>	<u>Zip</u>	<u>State</u>	<u>City</u>	<u>Address</u>	<u>Birthdate</u>	<u>E</u>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hgjh	Jery	15	Male	(765) 987-0987	87654	hj	hjkdsal	hdhfajkds	01/01/1900	hjjkk@
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	wawu	Tee	21	Male	(765) 987-0987	87654	hj	hjkdsal	hdhfajkds	01/01/1900	hjjkk@
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	bdjk	jkk	23	Female	(987) 765-0987	78899	es	fnasjfa	flajflds	07/23/2009	nfdki@
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	yu	kj	29	Female	(987) 123-0987	98765	yui	hjck	hjj@123.com	12/23/2008	hjkkn@l
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	Kala	Tee	32	Male	(765) 987-0987	87654	hj	hjkdsal	hdhfajkds	01/01/1900	hjjkk@
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	jkkk	ki	35	Male	(876) 987-7654	987	hhhh	jijklkl	hfoisah	12/09/1998	hjkj@t
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	Kala	Tee	49	Male	(765) 987-0987	87654	hj	hjkdsal	hdhfajkds	01/01/1900	hjjkk@

Fig.28 Sorting Page

Volunteer Register Management Interface.

- Volunteer Register Management Page. This page displays all the information retrieved from Volunteer register table store in SQL. The administrator can manipulate the information by selecting, editing, deleting and sorting.

	First Name	Last Name	Address	City	DPhone	Doctor	Alternate Phone	Phone	Zip	State	Parent
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	yaya	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	yiyi	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hehe	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	gege	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	qiqi	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	xixi	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	qoqo	keek	786 hekjalnm;	Riverside	(876) 876-	glksdjf	(213) 765-9876	(921) 987- 8765	92509	ca	hfsagioregr!

Fig.29 Volunteer Register Management Page

- Selecting Function. It is easy for administrator to follow the row of information which has been selected and checking since it is a long row of information in this page.

	<u>First Name</u>	<u>Last Name</u>	<u>Address</u>	<u>City</u>	<u>DPhone</u>	<u>Doctor</u>	<u>Alternate Phone</u>	<u>Phone</u>	<u>Zip</u>	<u>State</u>	<u>Parent</u>	<u>Mname</u>
Select	yaya	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks
Select	yiya	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks
Select	hehe	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks
Select	gege	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks
Select	qiqi	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks
Select	xixi	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks
Select	qoqo	keek	786 hekjalnm;	Riverside	(876) 876- 9876	glksdjf	(213) 765-9876	987- 8765	92509	ca	hfsagioregr	hfdks

Fig.30 Selecting Function

- Deleting Function. Click the delete hyperlink of the row and it will be deleted.
- Editing Function. Click the edit hyperlink of the row in which administrator want to edit and change the information as desired, but be careful about the format requirement per column, otherwise the database will reject the change if the format is not correct.

	<u>First Name</u>	<u>Last Name</u>	<u>Address</u>	<u>City</u>	<u>DPhone</u>	
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	keek	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hehe	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	HJ	JK	J	JHJK		
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hoho	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Update</a> <a href="#">Cancel</a>	lala	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	momo	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	nono	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	nono	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	qiqi	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	qoqo	keek	786 hekjalnm;	Riverside	(876) 876-9876	glksdjf

Fig.31 Editing Function Page

- **Sorting Function.** Click the head of each column, the information of the whole table will be sorted in the order of that column. For example, click "First Name" and the information in the whole table will be sorted by first name.

	<u>First Name</u>	<u>Last Name</u>	<u>Address</u>	<u>City</u>	<u>Phone</u>	<u>Doctor</u>	<u>Alternate Phone</u>	<u>Phone</u>	<u>Zip</u>	<u>State</u>	<u>Parent</u>
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	gege	keek	786 hekjahnn;	Riverside	(876) 876-9876	glksdjf	(213) 765-9876	(921) 987-8765	92509	ca	hfsagioregr
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hehe	keek	786 hekjahnn;	Riverside	(876) 876-9876	glksdjf	(213) 765-9876	(921) 987-8765	92509	ca	hfsagioregr
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	HI	JK	J	JHJK					98765	HUIJ	
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hoho	keek	786 hekjahnn;	Riverside	(876) 876-9876	glksdjf	(213) 765-9876	(921) 987-8765	92509	ca	hfsagioregr
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	hala	keek	786 hekjahnn;	Riverside	(876) 876-9876	glksdjf	(213) 765-9876	(921) 987-8765	92509	ca	hfsagioregr
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	momo	keek	786 hekjahnn;	Riverside	(876) 876-9876	glksdjf	(213) 765-9876	(921) 987-8765	92509	ca	hfsagioregr
<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Select</a>	mono	keek	786 hekjahnn;	Riverside	(876) 876-9876	glksdjf	(213) 765-9876	(921) 987-8765	92509	ca	hfsagioregr

Fig.32 Sorting Page



## Disability Sports Festival Website User Interface

Home Page. This is the first page users will see when browsing the address of the DSF website. It includes the account, form downloading, donations and welcome parts. It also displays the logo of DSF (Figure 33).

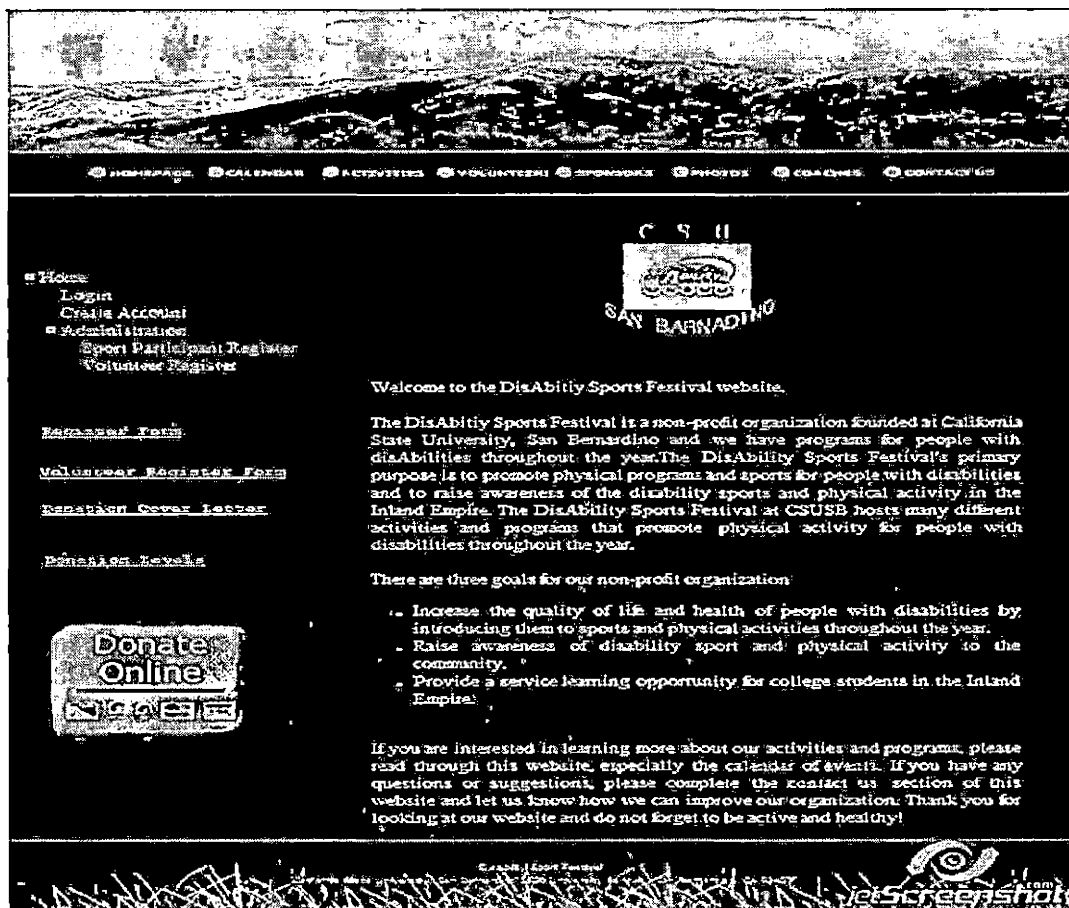


Fig.33 Home Page

Login Page. Click on "Login" hyperlink of the account part located on the left side of web page to login if a user has an account (Figure 34).

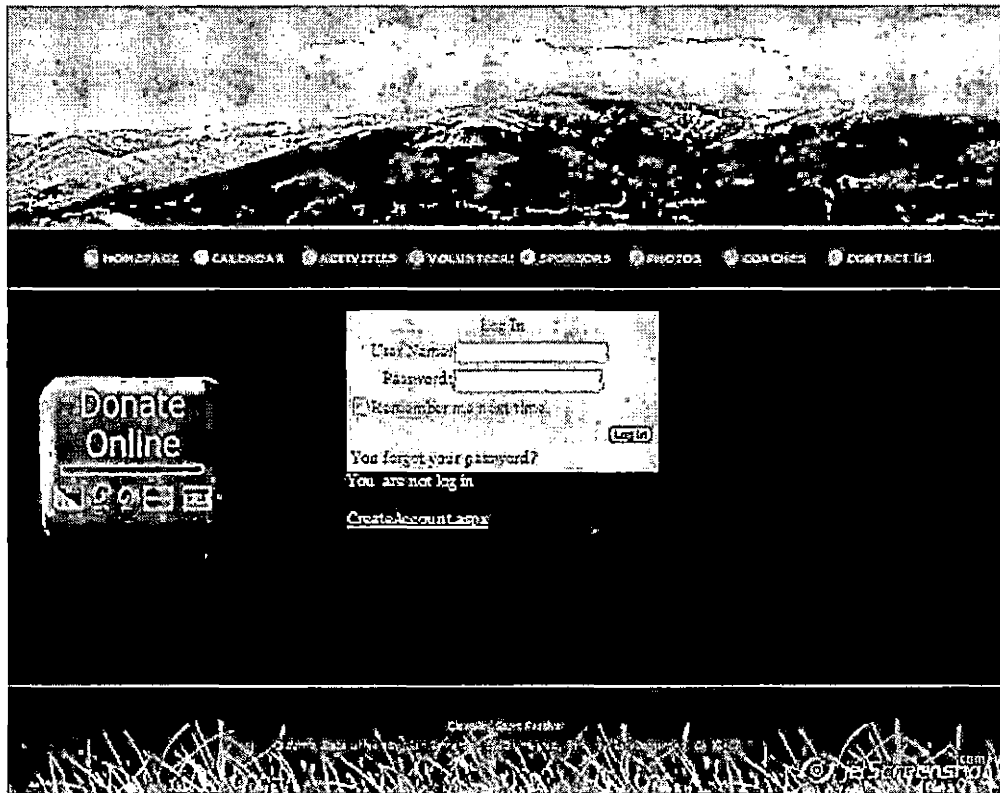


Fig.34 Login Page

Create Account Page. Click on "Create Account"  
hyperlink of the account part located on the left side of  
web page and create an account including information as  
below (Figure 35).



Fig.35 Create Account Page

Administrator Page. All users could browse almost all the web pages except the pages required administrator authorization. Such as administrator page, sport participant register management page and volunteer register management page.

This page includes calendar management, sports participants register management page and volunteers register management page (Figure36).

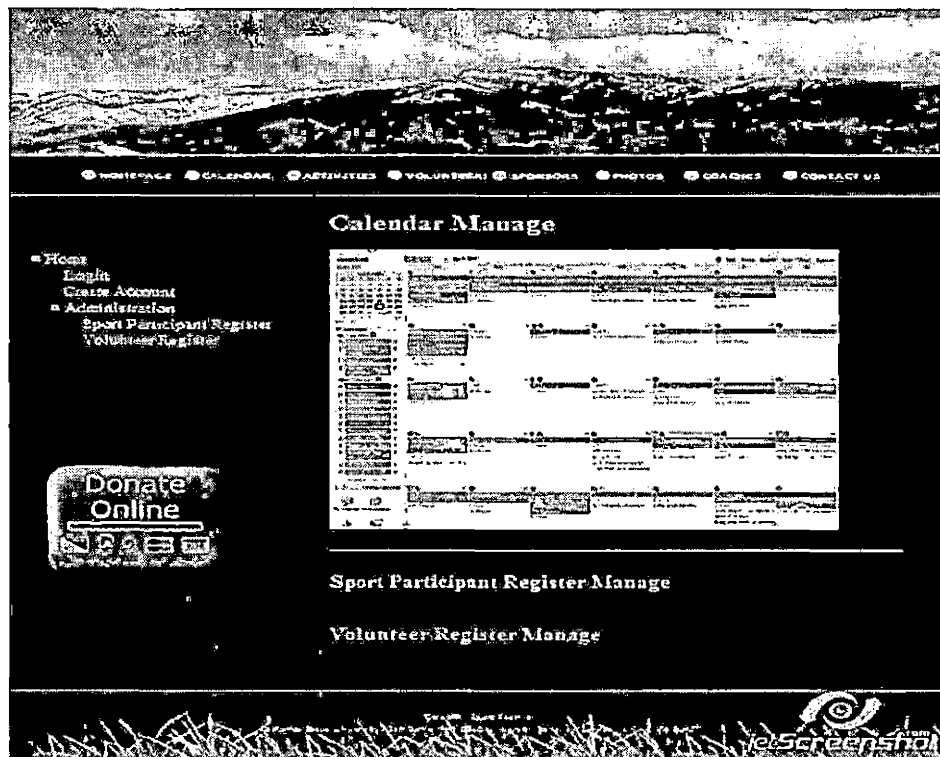


Fig.36 Administrator Page

Form Download Page. Click on hyperlink of any forms located on the left side of web page, a responding window will pop out to display a downloadable form (Figure 37).



Fig.37 Form Download Page

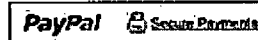
Donation Page. After Clicking on the image button of donations on the left side of web page, the page will be redirected to the donation page (Figure 38).

## yuhe li's Test Store

Please enter your donation amount and click Update Total.

Purpose	Donation amount	Total
csusb disability sport festive Reference: 12345678	\$ <input type="text"/>	\$
		\$ USD

Donate quickly with PayPal



PayPal securely processes donations for yuhe li's Test Store. You can complete your payment with just a few clicks.

### Why use PayPal?

- It's easy to send money and shop online
- You can donate without sharing your financial information
- Over 50,000 online merchants accept PayPal

### Don't have a PayPal account?

Use your credit card or bank account (where available). [Continue](#)



LOG IN TO PAYPAL

Email:

Password:

[Forgot email address or password?](#)

PayPal protects your privacy and security. For more information, read our [User Agreement](#) and [Privacy Policy](#).



Fig.38 Donation Page

Donators write down the amount of money that want to donate and then click "updated of total" and will be redirected to the following page (Figure 39).

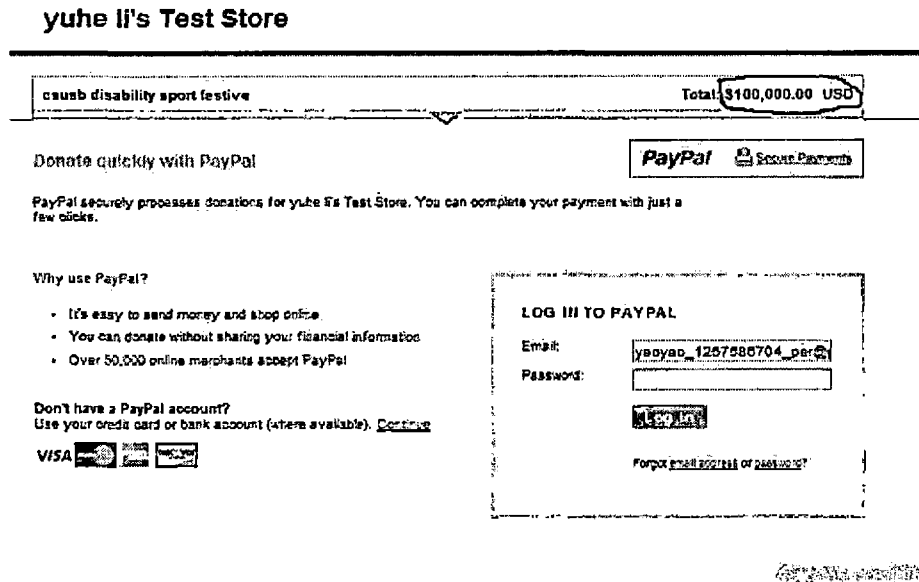



Fig.39 Donation Page 2

Then donators can choose the payment methods by using credit card, bank account or Paypal account. After they click submit button, the new page is as following (Figure 40).

**yuhe ll's Test Store**

---

Test, please review your donation **PayPal** 

To complete your payment, review the details below and click **Donate**. Visit [Funding Sources](#) to learn more about PayPal policies and your payment source rights and remedies, or to change debit card processing options.

Payee	Donation amount	Total
Sport festival	\$1,000.00	\$1,000.00
<input checked="" type="checkbox"/> <a href="#">Add PayPal transactions to report</a>		
	<b>Total:</b>	<b>\$4,000.00 USD</b>

---

**Payment Method:**

PayPal Balance	\$34.00 USD
Instant Transfer : Chase Manhattan Checking (Confirmed) x-1138	\$966.00 USD

PayPal ID: 126758704\_2006-0000-31700-1 and this transaction if your bank does not have enough funds.  
[Change](#)

**Mailing address:**

1 Main St  
San Jose, CA 95131  
United States  
[Change](#)

**Contact information:** yaoyao\_126758704\_per@gmail.com






Fig.40 Donation Page 3



Calendar Page. In this page, users can browse the programs scheduled in a specific day, week or month (Figure 41).

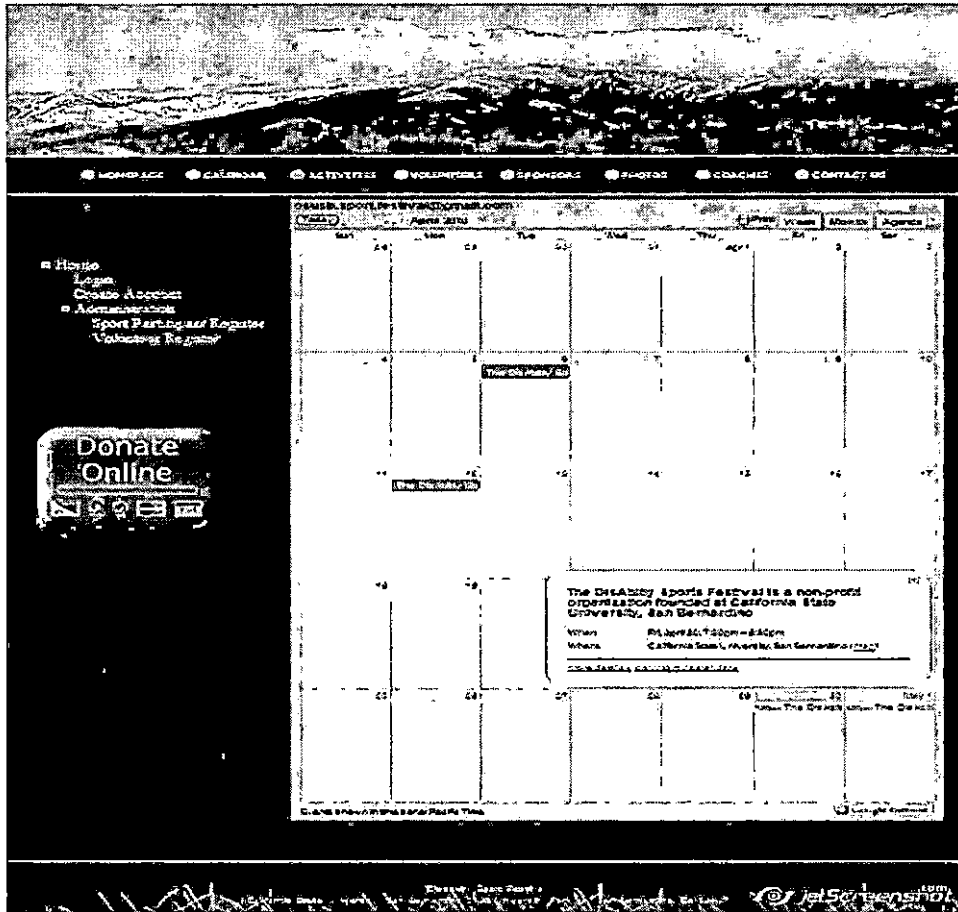


Fig.41 Calendar Page

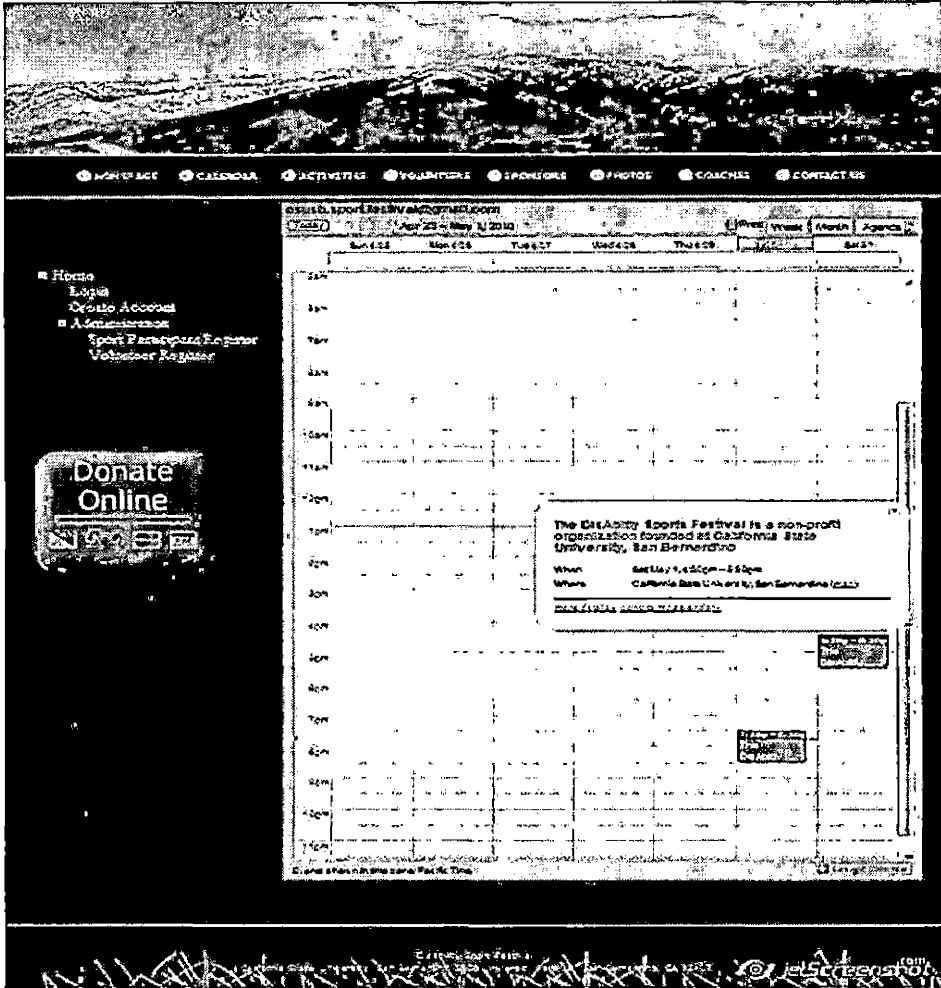


Fig.42 Calendar Page 2

Calendar page provides the agenda for information checking (Figure 43).

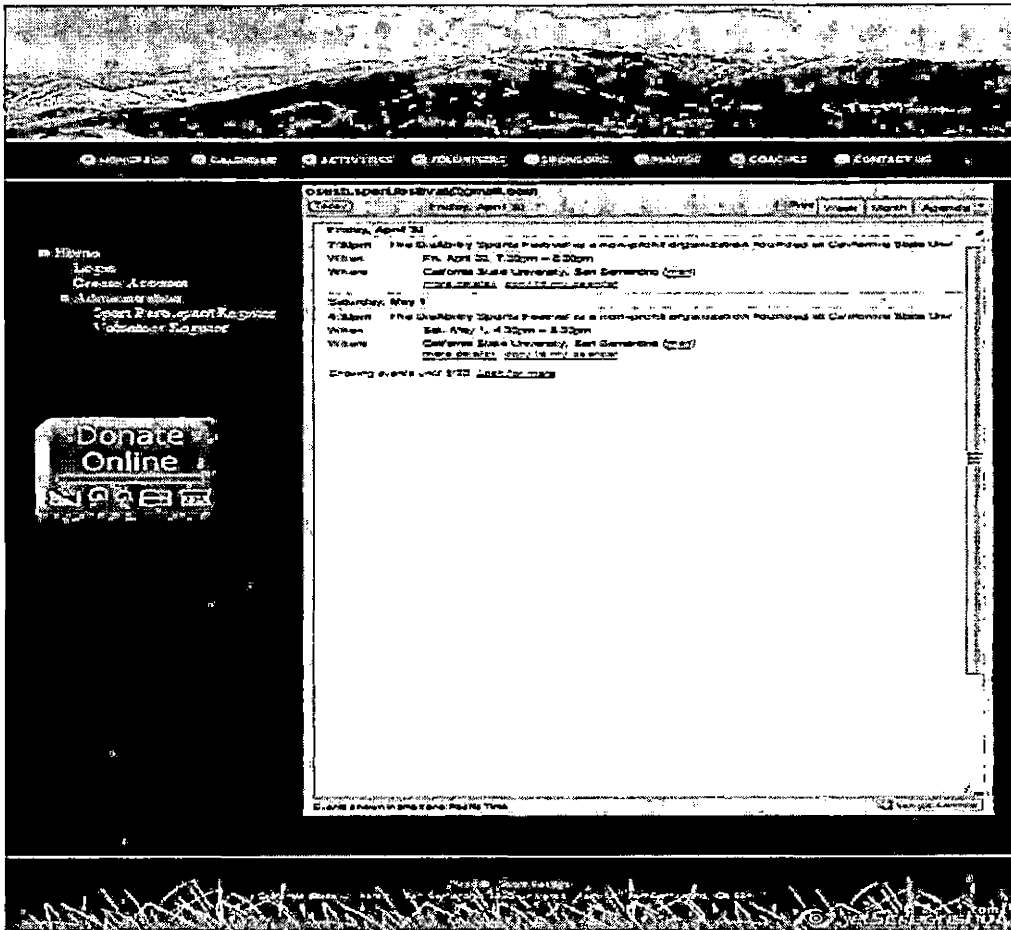


Fig.43 Calendar Page 3

Calendar page also provides the print function (Figure

44).

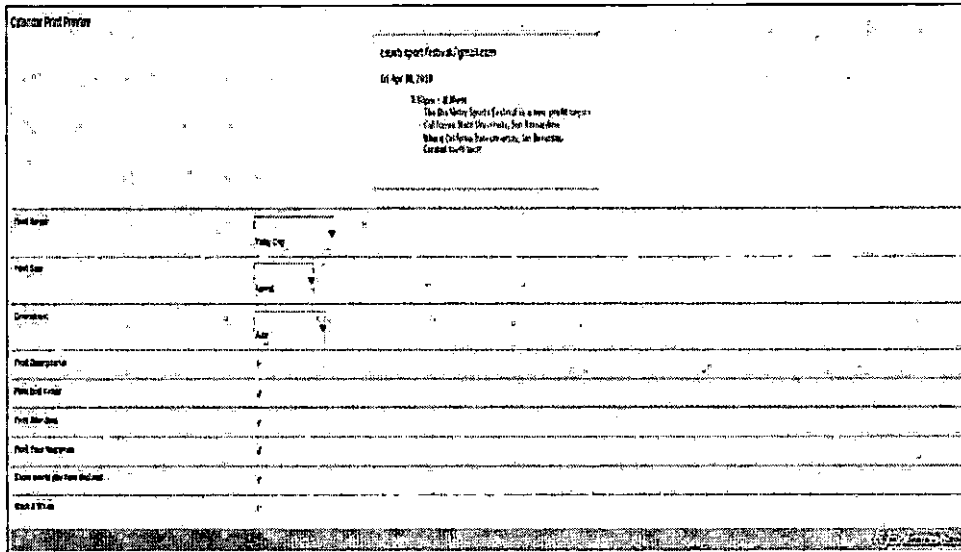


Fig.44 Calendar Print Page

Activities Page. All the sports provided by DSF and DSF'S programs through year are introduced in this page. It also offers sport participant registration and form download (Figure 45).

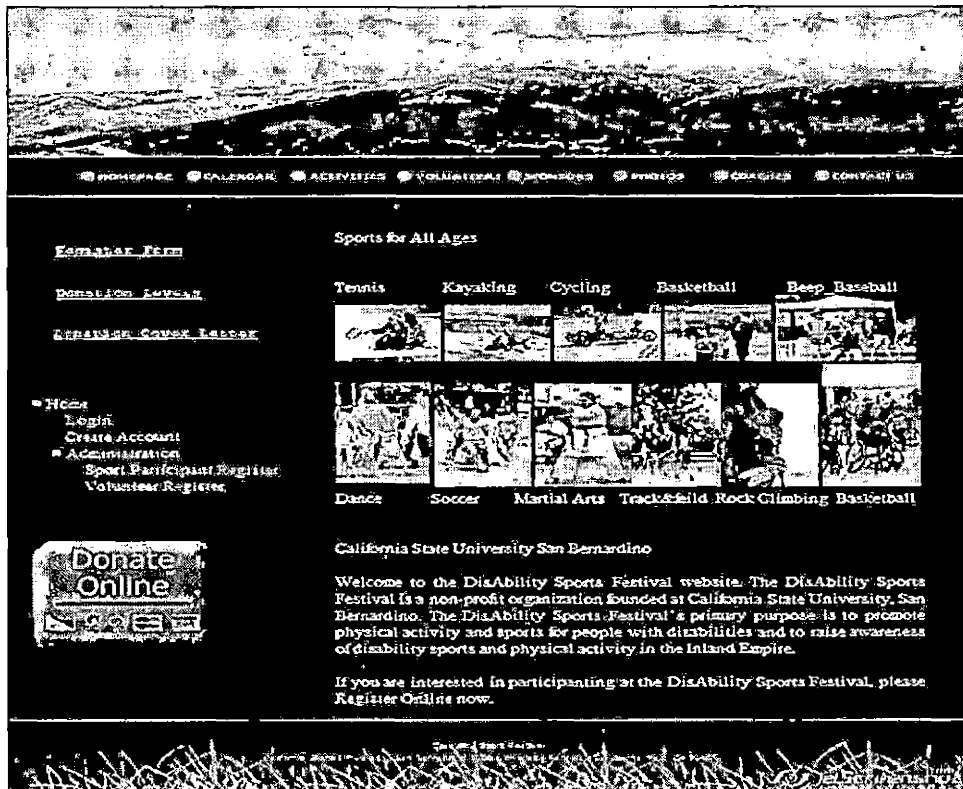


Fig.45 Activities Page

Sport Participant Register Page. This page was designed based on the sport participant registration form provided by DSF committee (Figure 46).

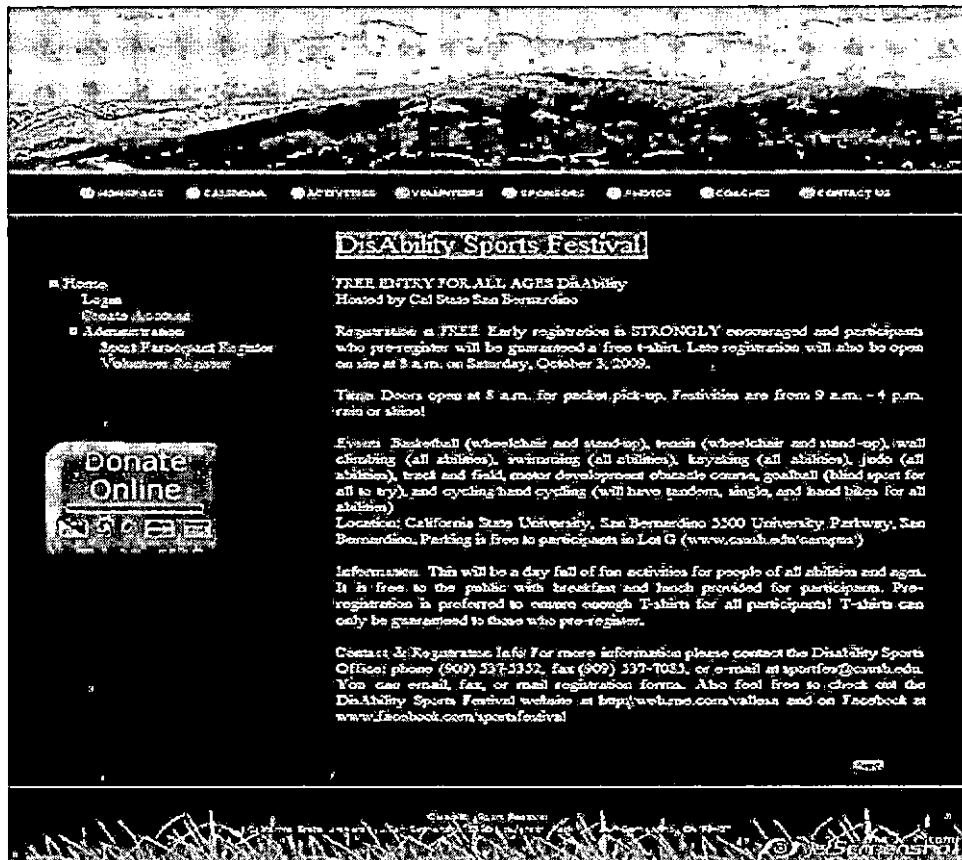


Fig.46 Sport Participant Register Page

Click the "Next" button and redirect to another page (Figure 47).

Navigation: HOME PAGE | CALENDAR | ACTIVITIES | VOLUNTEER | SPONSORS | PHOTOS | COACHES | CONTACT US

Home  
Login  
Create Account  
Administration  
Sport Participant Register  
Volunteer Register

Donate Online

First Name  
Last Name  
Age  
Gender  
 Female  Male  
Date of Birth  
Address  
City  
State  
Zip  
Phone Number  
Email Address

JetScreenShot

Fig.47 Sport Participant Register Page 2

T-shirt size

Event Categories (Please Mark All That Apply)

(\*\* For people with and without visual impairments.)

- Kayaking
- Basketball
- Wheelchair Basketball
- Tennis
- Wall Climbing
- Martial Arts
- Swimming
- Hand Cycling
- Cycling
- Track & Field
- Goal Ball \*\*
- Beep Baseball\*\*
- Dance
- Soccer
- Motor Skills Activity

Disability Type (Please Mark All That Apply)

- Intellectual Disability (i.e. Down Syndrome)
- Specific Learning
- Autism
- Hearing Impairments / Deafness
- Traumatic Brain Injury
- Visual Impairments / Blindness
- Orthopedic Impairment/physical disability (i.e. SCI, cerebral palsy)
- Other Health Impairments (i.e. ADD / ADHD)
- Other Medical Conditions:

Has the participant had a seizure in the last 5 years?

Yes  No



Fig.48 Sport Participant Register Page 3



Has the participant had a seizure in the last 5 years?

Yes  No

If yes, please describe the seizure? Time it usually lasts? Unconscious? What symptoms before it occurs? Is there anything in particular to avoid?

In case of an emergency, who should we contact?

Name:

Phone Number:




Fig.49 Sport Participant Register Page 4

Volunteer Page. This page offers volunteer registration and form download (Figure 50).

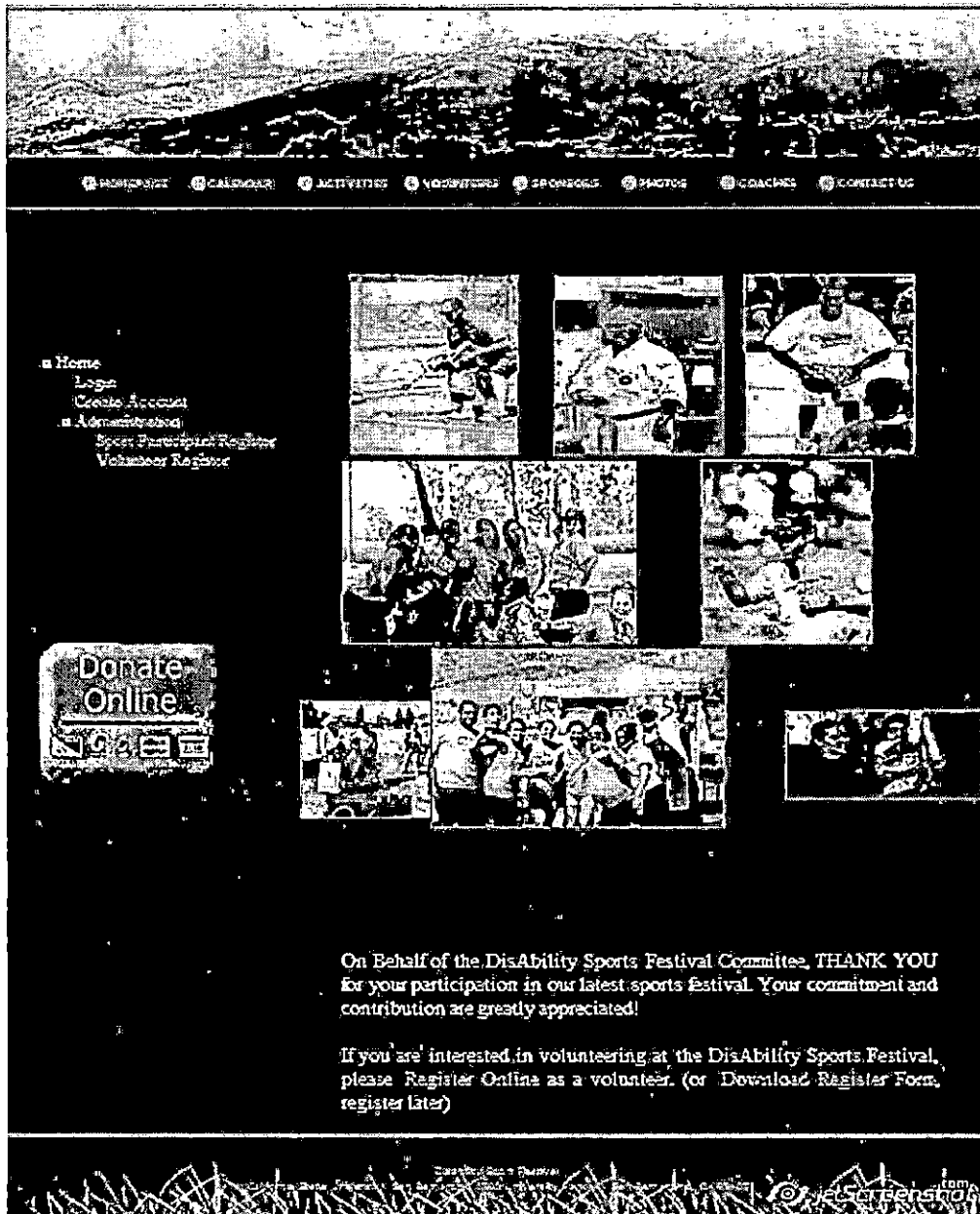


Fig.50 Volunteer Page

Volunteer Register Page. This page was designed based on the volunteer register form provided by DSF committee (Figure 51).

The image shows a screenshot of a web-based volunteer registration form. The page has a dark background with a light-colored header area. At the top, there is a navigation menu with several items: Home, About Us, Contact Us, Services, and a dropdown menu for 'Volunteer Register'. Below the navigation menu, there is a 'Donate Online' button. The main content area contains a registration form with the following fields: First Name, Last Name, Address, City, State, Zip, Phone, Address Phone, Doctor, Phone, and a checkbox for 'I am a volunteer'. The form is styled with a light background and dark text. The JetScreenShot.com logo is visible in the bottom right corner of the screenshot.

Fig.51 Volunteer Register Page1

Volunteer's Name:  
 \_\_\_\_\_  
 \_\_\_\_\_

Phone:  
 \_\_\_\_\_  
 \_\_\_\_\_

Address: Relative to Contact:  
 \_\_\_\_\_  
 \_\_\_\_\_

Religiousity:  
 \_\_\_\_\_  
 \_\_\_\_\_

Phone:  
 \_\_\_\_\_  
 \_\_\_\_\_

Known Manager:  
 \_\_\_\_\_  
 \_\_\_\_\_

Last contact date:  
 \_\_\_\_\_  
 \_\_\_\_\_

Approved: Extension/Special Restrictions:  
 \_\_\_\_\_

**CONSENT AND RELEASE**  
 I have read the information provided to me about the All-Ohio State Program. I understand that there is risk of physical injury involved in the physical activities outlined therein. I agree to assume that risk. I am not being compensated for my services and I understand that emergency care may be arranged through the medical facilities at Columbus State University, New Brunswick, and that I am responsible for paying for those services (including costs to 24-7).

I agree

**PHOTO AND VIDEO RELEASE**  
 On occasion (pictures/videos may be taken to promote the program) it is understood that those pictures will be taken under the supervision of the director and your consent will be taken to assure that the individual will not be embarrassed by their use.

Permission is granted  
 Permission is not granted

\_\_\_\_\_  
 \_\_\_\_\_

Fig.52 Volunteer Register Page2

Volunteer Register Form Download (Figure 53).

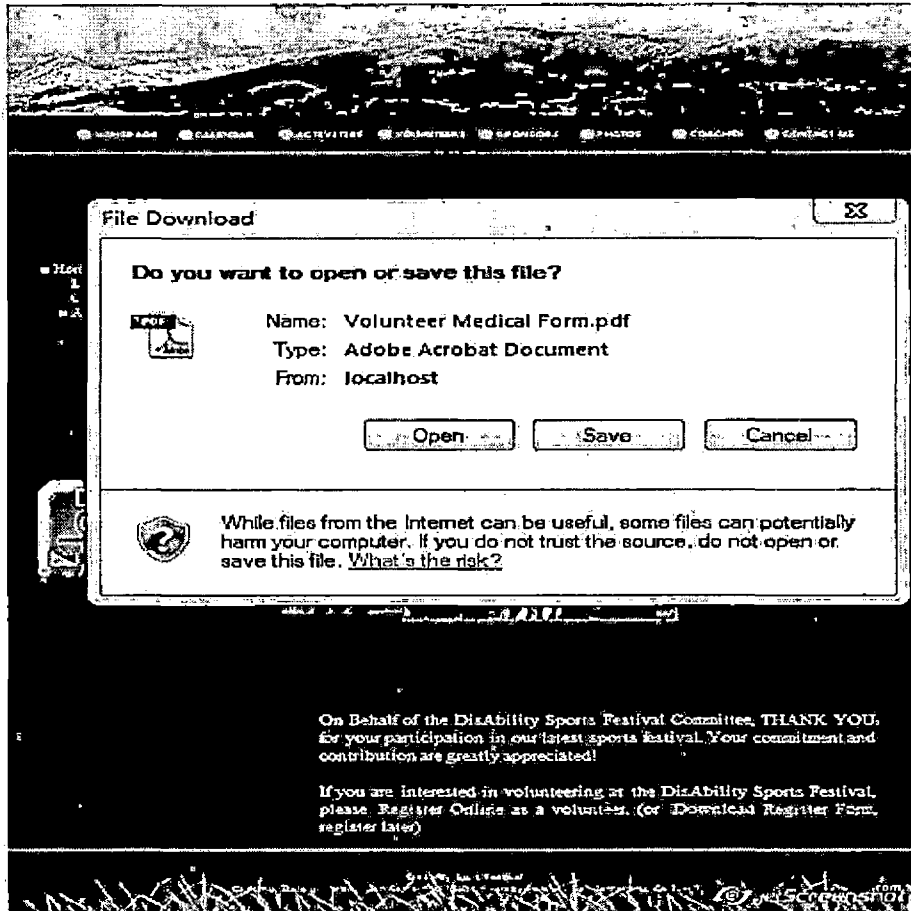


Fig.53 Volunteer Register Page3

Sponsors Page. Sponsors who support DSF are introduced and hyperlinks of their websites are provided (Figure 54).

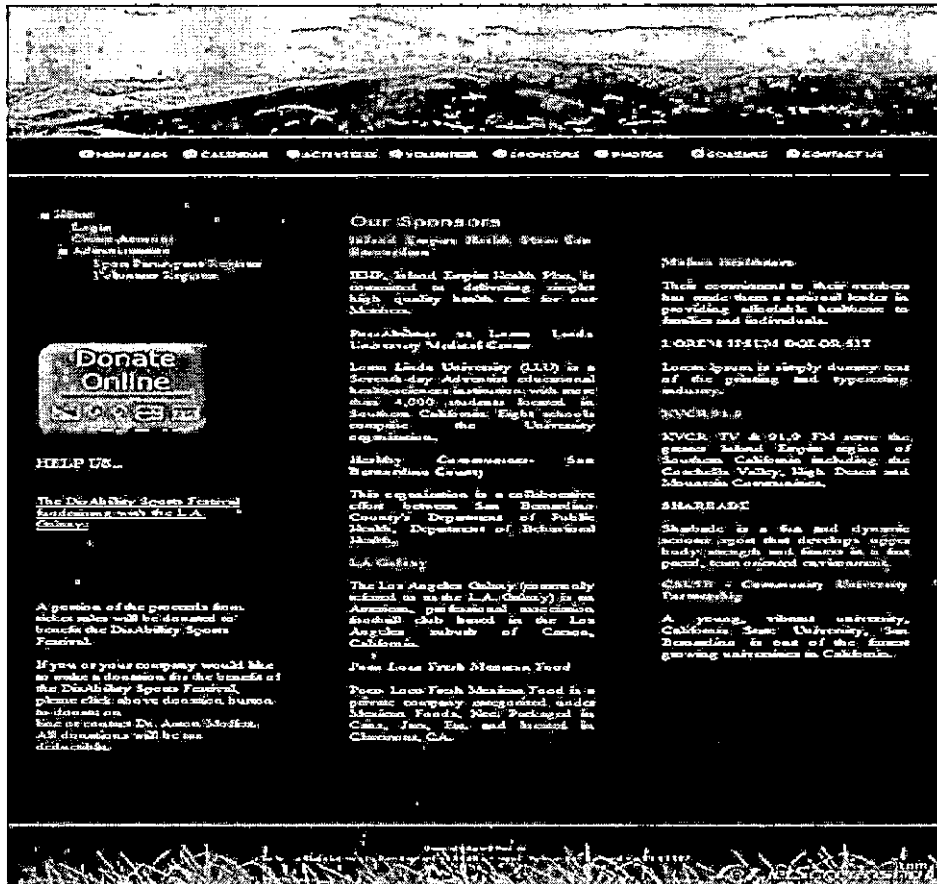


Fig.54 Sponsors Page

Click DSF fundraising hyperlink and download form  
(Figure 55).

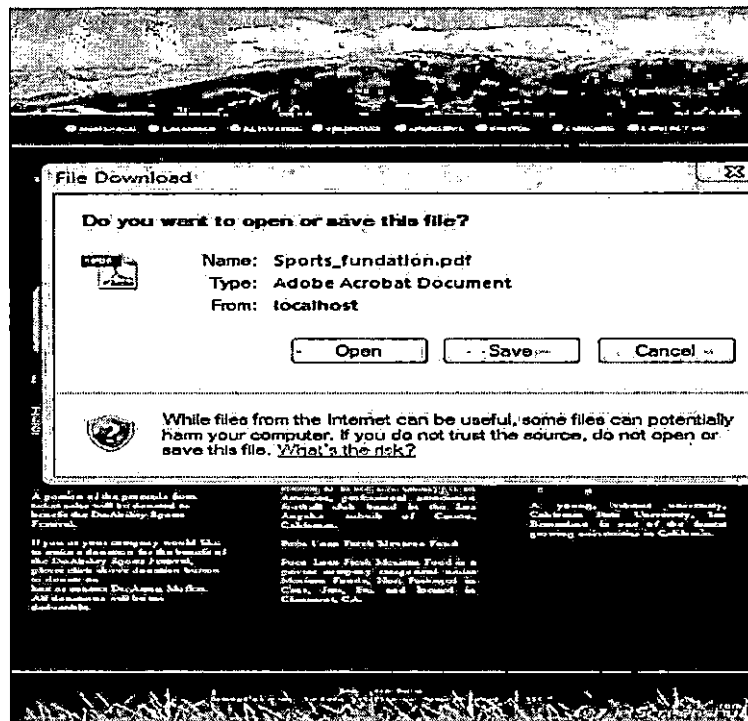


Fig.55 Funding Form Download

Photos Page. This page includes slideshow and video (Figure 56).



Fig.56 Video in Photo Page



Slideshow Page. The slideshow can be controlled through the buttons of "previous", "next" and "stop" (Figure 57).

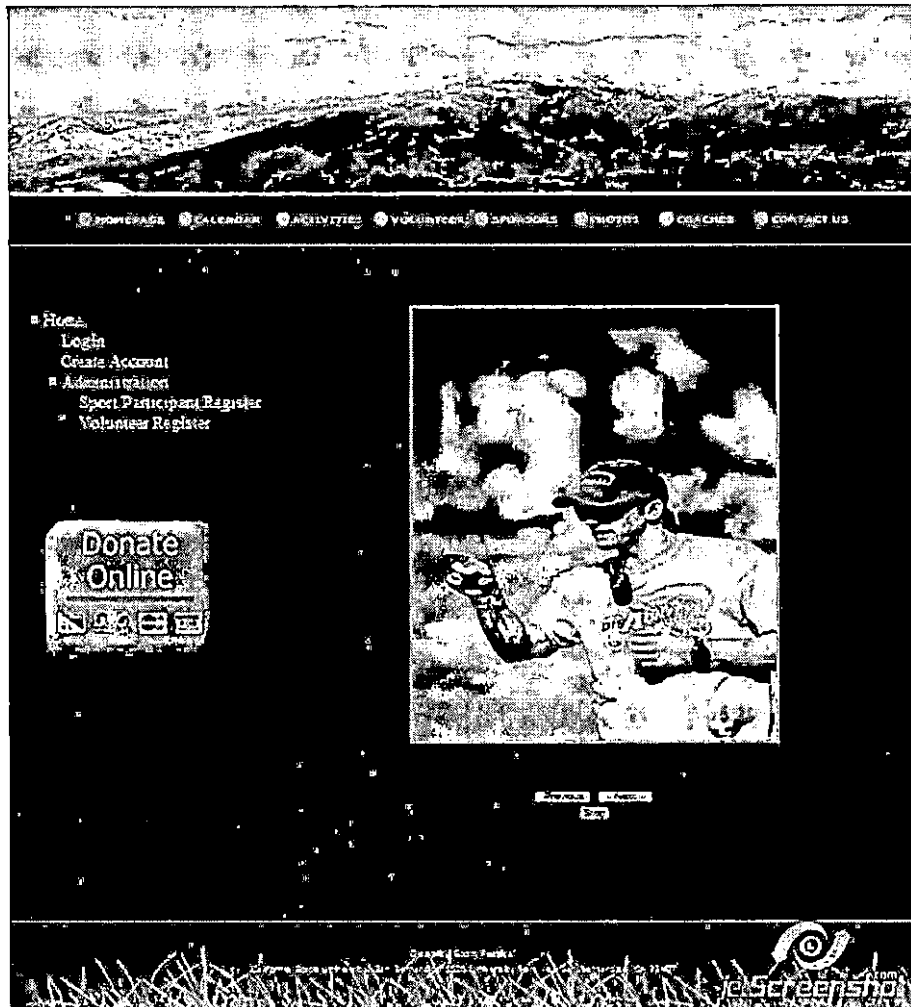


Fig.57 Slideshow Page

Coach Page. This page displays the contact information of the coaches who are responsible for the disability sports.

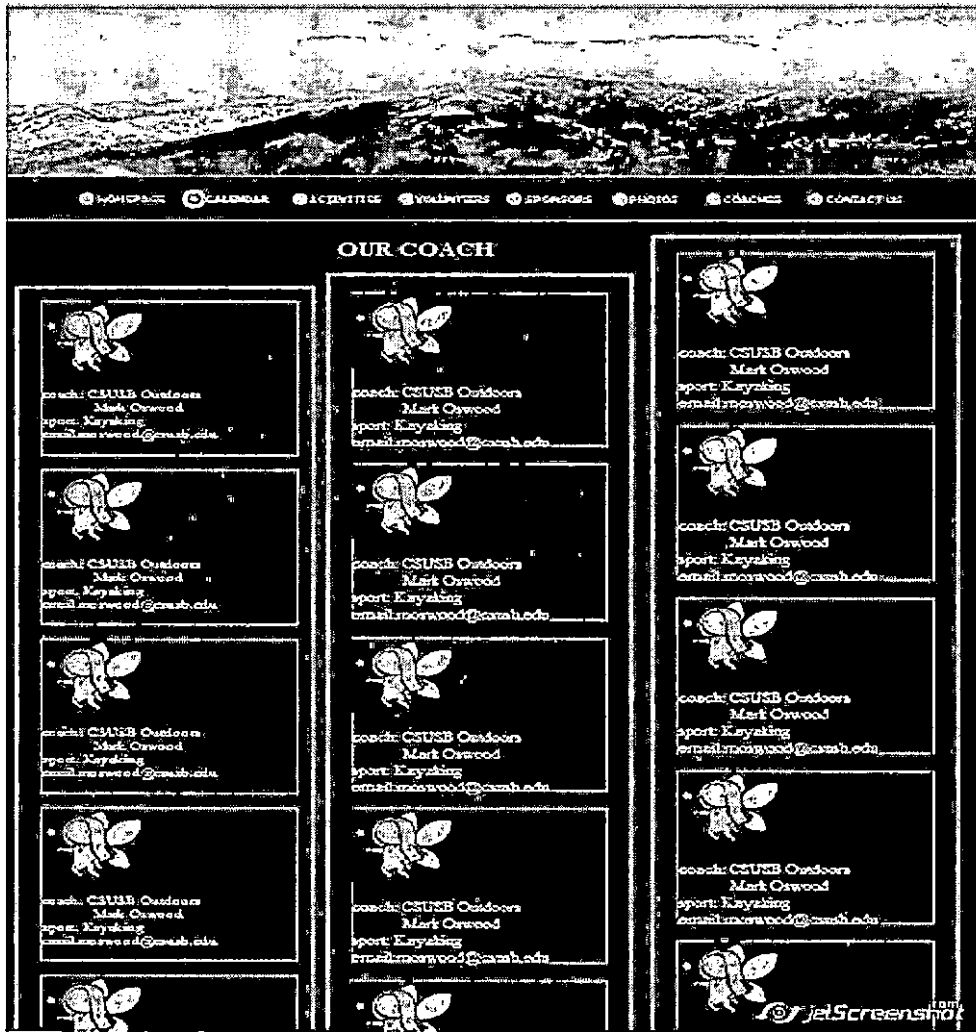


Fig.58 Coach Page

Contact Us Page. Through this page, users can contact DSF directly by sending email to DSF organizers.

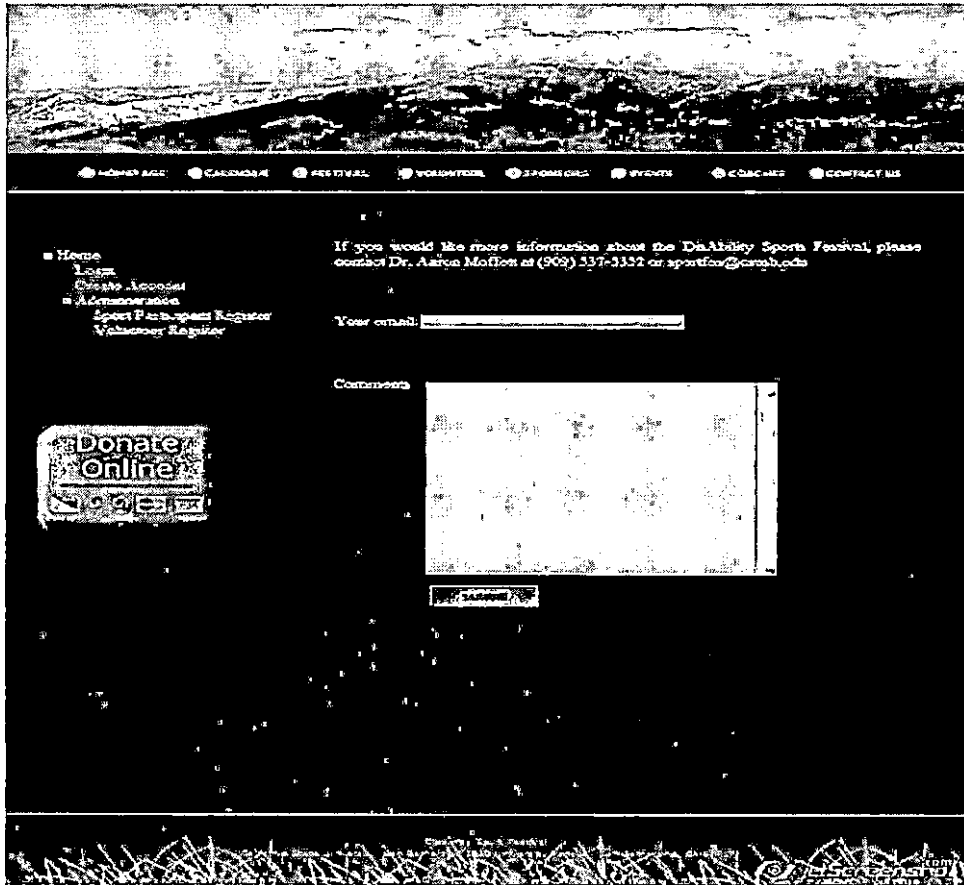


Fig.59 Contact Page

## AJAX Page Integrated into ASP.NET Page

DSFW uses ASP.NET AJAX framework and the ASP.NET AJAX Control Toolkit to enhance an existing ASP.NET 2.0 application. In order to integrate Ajax page into Asp.net page, the following two steps can be carried out to allow system to successfully combining the two frameworks.

### Download ASP.NET AJAX Installer and Install

Download the ASP.NET AJAX installer and ASPAJAXExtSetup.msi, from official site, (<http://ajax.asp.net>) and install it. This adds a new set of project templates and new Toolbox controls accessible to DSFW project in Visual Studio 2005.

### Setting Up the ASP.NET AJAX Control Toolkit

After installing ASP.NET AJAX, download the ASP.NET AJAX Control Toolkit and setting up the ASP.NET AJAX Control Toolkit.

Modify the Web.config. Because ASP.NET AJAX is a new technology, it is not fully integrated into the base configuration files of .NET 2.0. As a result, several new configuration entries must be added to an AJAX-enabled DSFW's web.config.

```

web.config
<?xml version="1.0"?>
<!--
Note: As an alternative to hand editing this file you can use the
web admin tool to configure settings for your application. Use
the Website->Asp.Net Configuration option in Visual Studio.
A full list of settings and comments can be found in
machine.config.comments usually located in
Windows\Microsoft.Net\Framework\v2.x\Config
-->
<configuration xmlns="http://schemas.microsoft.com/.NetConfiguration/v2.0">
  <configSections>
    <sectionGroup name="system.web.extensions" type="System.Web.Configuration.SystemWebExtensionsSectionGroup,
      System.Web.Extensions, Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
      <sectionGroup name="scripting" type="System.Web.Configuration.ScriptingSectionGroup, System.Web.Extensions,
        Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
        <section name="scriptResourceHandler" type="System.Web.Configuration.ScriptingScriptResourceHandler,
          System.Web.Extensions, Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35"
          requirePermission="false" allowDefinition="MachineToApplication"/>
        <sectionGroup name="webServices" type="System.Web.Configuration.ScriptingWebServicesSectionGroup,
          System.Web.Extensions, Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
          <section name="jsonSerialization" type="System.Web.Configuration.ScriptingJsonSerializationSectionGroup,
            System.Web.Extensions, Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
            <section name="profileService" type="System.Web.Configuration.ScriptingProfileServiceSectionGroup,
              System.Web.Extensions, Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35">
              <section name="authenticationService" type="System.Web.Configuration.ScriptingAuthenticationServiceSectionGroup,
                System.Web.Extensions, Version=1.0.61025.0, Culture=neutral, PublicKeyToken=31bf3856ad364e35" requirePermission="false"
                allowDefinition="MachineToApplication"/>
            </section>
          </sectionGroup>
        </sectionGroup>
      </sectionGroup>
    </configSections>
  </configuration>

```

Fig.60 Ajax-Enable Web.config

## CHAPTER FIVE

### SOFTWARE TESTING

This chapter is to test the software qualities of the DSFW.

The purpose of this software testing is to evaluate the attributes or capabilities of the DSFW and determine if it meets its required results. The following sections depict the results in different testing levels. The Paypal Sandbox environment is used to test donation processing.

#### Unit Testing

Unit testing is a method of testing that determines whether or not the individual units of source code are working properly. A unit is the smallest testable part of an application in DSFW Projection

Both black and white box are intergrated into unit testing. The results of unit testing in this section are shown in Table 14.

Table 14. Unit Testing Results

Page	Test	Results
Home	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that it downloads proper file after clicking certain linkbutton</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p>	pass
Calendar	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that Calendar works and can be printed</p> <p>Verify that the Paypal button works</p>	pass
Activities	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that it downloads proper file after clicking certain linkbutton</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p>	pass
Sport Register	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that error message displays correctly when error occurs</p> <p>Verify that it redirects to the</p>	pass

	<p>proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p> <p>Verify that register process successfully and the data inserts into data base</p>	
Volunteer	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that it downloads proper file after clicking certain linkbutton</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p>	pass
Volunteer Register	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that error message displays correctly when error occurs</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p> <p>Verify that register process successfully and the data inserts into data base</p>	pass
Sponsor	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that it downloads proper file after clicking certain linkbutton</p>	pass



	<p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p>	
Phones	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that the video show workes</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works</p>	pass
Coach	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works properly</p>	pass
Contact us	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that error message displays correctly when error occurs</p> <p>Verify that email will be sent out</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works properly</p>	pass

Slideshow	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that the slid show works</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works properly</p>	pass
Admin	<p>Verify that it redirects to proper page after clicking the menu button</p> <p>Verify that it redirects to the proper page after clicking certain hyperlink</p> <p>Verify that the Paypal button works properly</p>	pass
SportRegister Manage	<p>Verify that editting, selecting, paging, deleting, and sorting all work properly</p>	Pass
Volunteer Register Manage	<p>Verify that editting, selecting, paging, deleting, and sorting all work properly</p>	pass
Login	<p>Verify all buttons work properly</p> <p>Verify that error message displays correctly when error occurs</p> <p>Verify that page is redirected to proper page when correct authentication is entered</p>	Pass

<p>Change Password</p>	<p>Verify all buttons and links work properly</p> <p>Password Verify that error message displays correctly when error occurs</p> <p>Verify that new password has been saved correctly</p>	<p>pass</p>
<p>Account Creation</p>	<p>Verify all buttons work properly</p> <p>Verify that error message displays correctly when error occurs</p> <p>Verify that the page is redirected to proper page when correct information is entered</p>	<p>pass</p>
<p>Forgot Password</p>	<p>Verify all buttons work properly</p> <p>Verify that error message displays correctly when error occurs</p> <p>Verify that the page is redirected to proper page when correct information is entered</p>	<p>pass</p>

### System Testing

The purpose of integration testing is to detect any inconsistencies between the software units that are integrated together. DSFW has four major parts that need system testing: Administrator, Sport Participant Register, Volunteer Register and Slideshow. Table 17 shows the testing results.

Table 15. System Testing

System	Test	Result
Administrator	<p>Verify that only authenticated personnel can access Admin folder</p> <p>Verify that administrator can sort, select, edit and delete sport participant register information</p> <p>Verify that administrator can sort, select, edit and delete volunteer register information</p> <p>Verify that administrator can add, edit and delete programs through calendar</p>	pass
Sport Participant Register	<p>Verify that page information can be submitted successfully and stored into database</p> <p>Verify that page information can be correctly retrieved from database to the Sport participant register management page</p> <p>Verify that administrator can sort, select, edit and delete sport participant register information</p>	pass
Volunteer Register	<p>Verify that page information can be submitted successfully and stored into database</p> <p>Verify that page information can be correctly retrieved from database to</p>	pass

	<p>the Sport participant register management page</p> <p>Verify that administrator can sort, select, edit and delete volunteer register information</p>	
Slideshow	<p>Verify that Ajax tool works correctly within the Asp.net page</p> <p>Verify that Asp.net page works correctly with the Ajax tool</p>	pass

## System Integration Testing

This testing mainly tests that the DSFW is integrated into the Paypal payment system with Paypal API and SQL database systems and can be successfully deployed on IIS. Table 16 shows the testing results.

Table 16. System Integration Testing

System	Test	Result
SQL	Installation & Start up	pass
Paypal API	Set up Paypal Payment Pro account Request for Paypal API username and password Set up API environment Process payment with testing accounts	pass

## CHAPTER SIX

### MAINTENANCE MANUAL

Maintaining the system is an important aspect of The Systems Development Life Cycle.

Without maintained and stable web and database, Disability Sports Festival can not provide a reliable and 24/7 website for users. This following section contains instructions for setting up and managing Internet Information Server and all necessary applications for running the DSFW.

#### Operation System Installation

To the website, it is critic to have a stable and secure server. Since Microsoft Windows Server 2003 Standard Edition offers secure Internet connectivity and delivers better performance, it was chosen to be the operating system of DSFW.

#### Install the Windows Server 2003

The easiest installation method is installing directly from a CD by booting computer with the CD.

### Hardware Requirement.

- Computer and processor. PC with a 133-MHz processor required; 550-MHz or faster processor recommended; support for up to four processors on one server
- Memory. 128 MB of RAM required; 256 MB or more recommended; 4 GB maximum
- Hard disk. 1.2 GB for network install; 2.9 GB for CD install

### IIS 6.0 Web Server Installing

Make sure that .NET 2.0 Framework is installed after the IIS web server is. If you first installed the framework, please use the below command line:

```
C:\[WinDir]\Microsoft.NET\Framework\[Version]\aspnet_regiis.exe -i
```

Before starting to install the IIS web server, an antivirus software should be installed to secure the operating system.

### .NET 2.0 Framework Installing.

### Set up a ASP.NET Web Site with IIS.



- To start IIS Manager, select Settings -> Control Panel -> Administrative Tools Internet Services Manager from the Start menu.
- The next step would be to create a virtual directory for an existing physical directory. Expand the Web Sites item in the IIS tree, right-click the Default WebSite item and choose New -> Virtual Directory from the menu

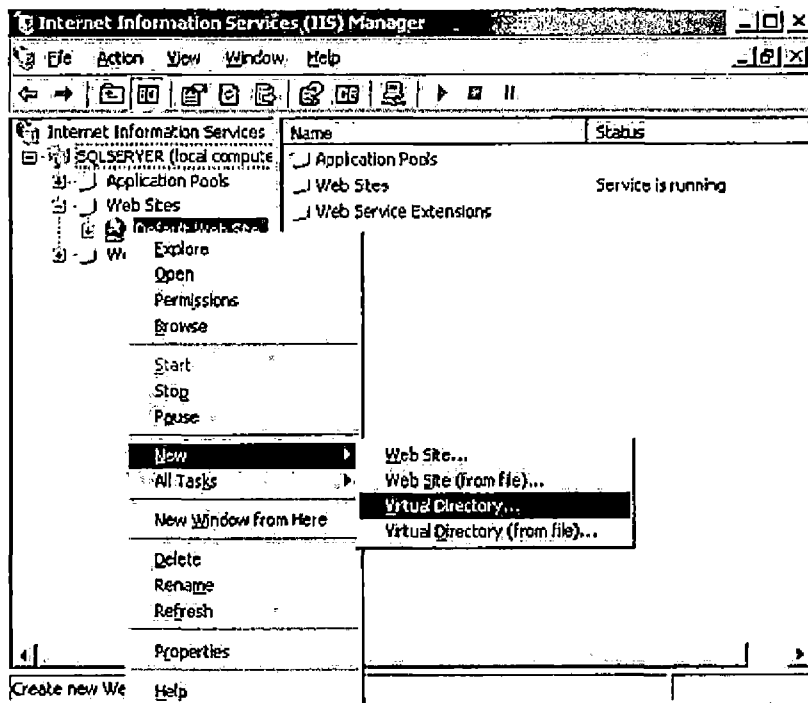


Fig.61 Create a Virtual Directory

- The first step in the wizard responsible with the virtual directory creation is to choose an alias (see Figure 62). The alias is the name a user will use in his URL to access the files in this virtual directory.

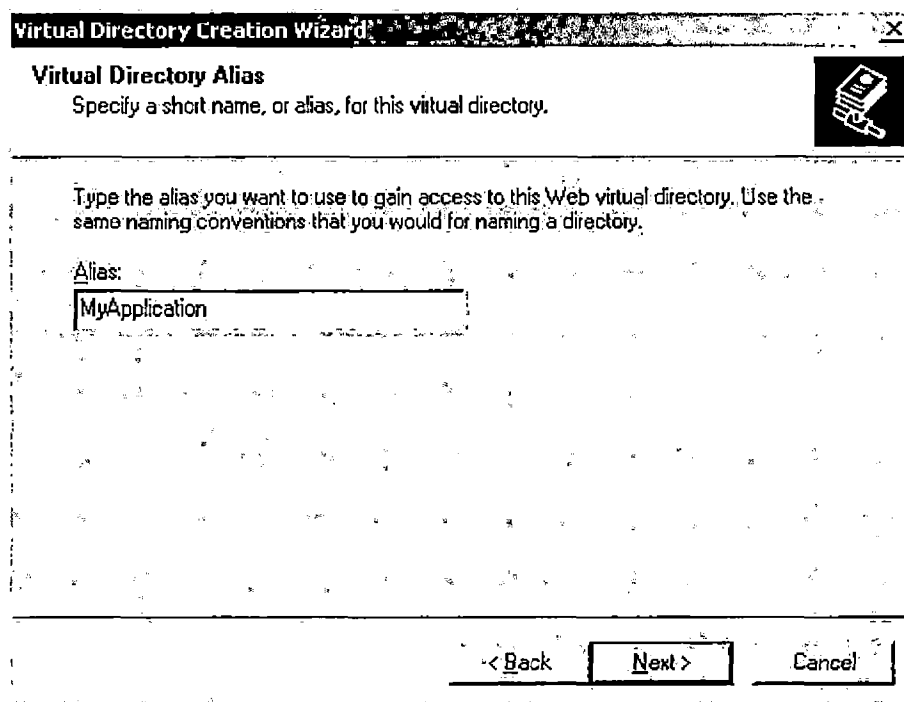


Fig.62 Alias

- The next step in this wizard is to provide an existing physical directory to which the virtual directory will point to (Figure 63).

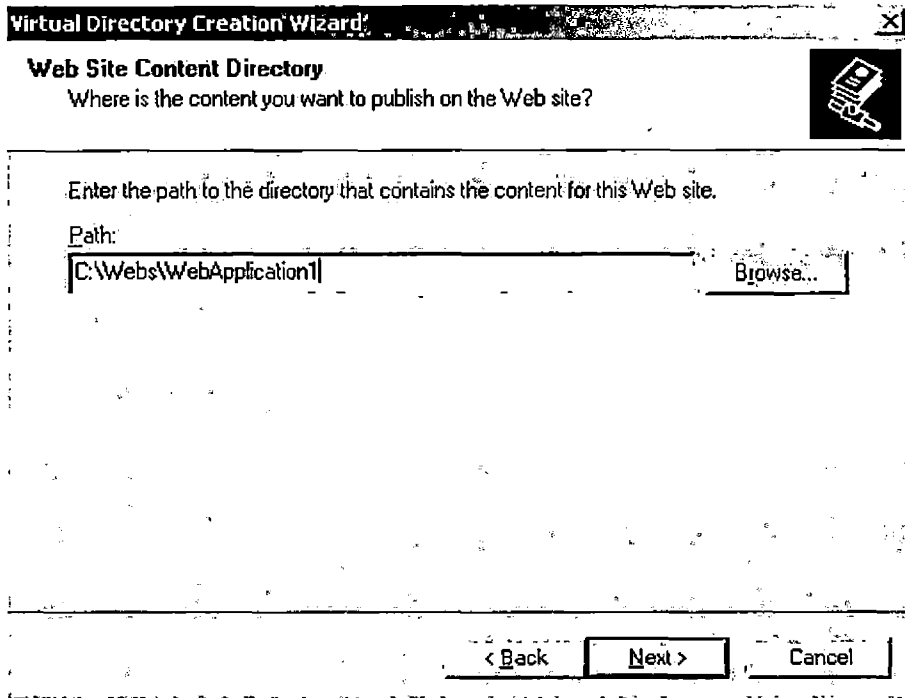


Fig.63 Path of the Directory

- The final step in this wizard is to choose the permissions for the virtual directory (Figure 64).

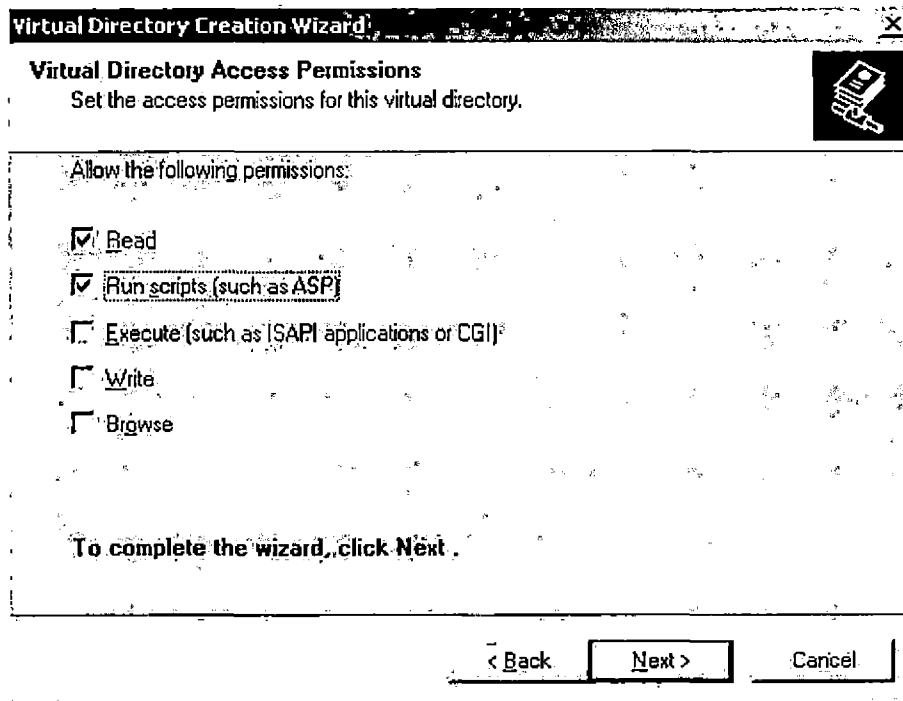


Fig.64 Setting Permissions

- Click next and then Finish to create the virtual directory.

After finishing these steps, the new virtual directory appears in the list in IIS Manager.

## Installing Microsoft AJAX

Downloading and Installing MS Ajax Extensions. For .Net Framework 2.0, it need install the MS Ajax extensions manually. Here's the download link to the installer.<http://go.microsoft.com/fwlink/?LinkID=77296>

Setting Up the ASP.NET AJAX Control Toolkit. After installing ASP.NET AJAX, download the ASP.NET AJAX Control Toolkit and setting up the ASP.NET AJAX Control Toolkit to Make Ajax Work on DSF Website on the Server.

Download the toolkit from the following location:

<http://www.codeplex.com/AjaxControlToolkit>

## SQL Server 2005 Installation and Configuration.

Followed the step by step installing, the installation wizard will guider DBA to finish the installation.

**Step 1: Prepare Your Computer to Install SQL Server 2005.** Make sure that the system meets all hardware and software requirements.

**Step 2: Install SQL Server 2005.** To install SQL Server 2005, run Setup using the SQL Server 2005 Installation Wizard or install from the command prompt.

**Step 3: Configure Your SQL Server 2005 Installation.**

After you finished installation, The "Help Protect Your SQL Server" screen will appear:

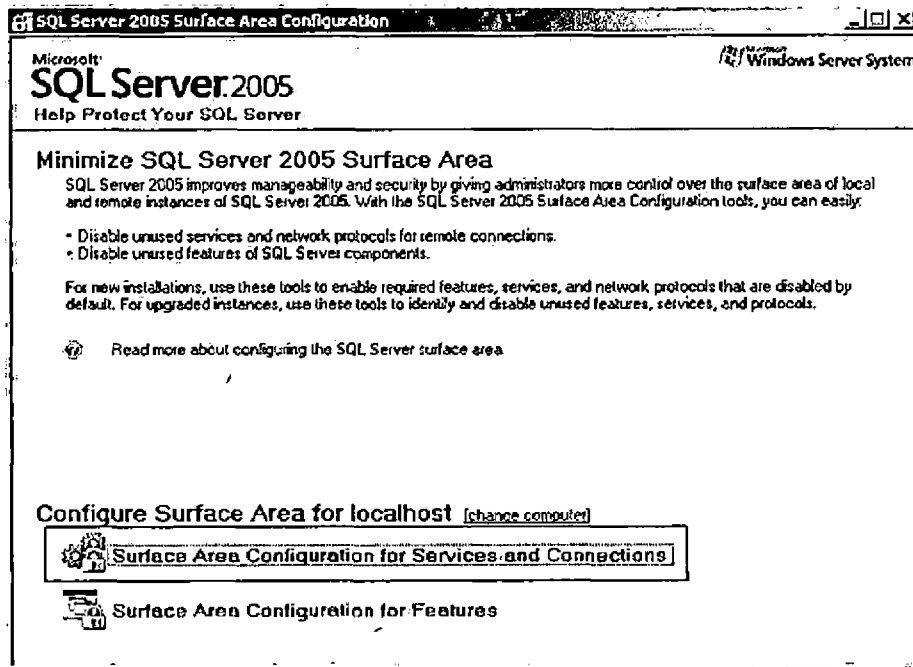


Fig.65 SQL Protection Page

Click on the Surface Area Configuration for Services and Connections link.

The SQL Server 2005 Surface Area Configuration screen will appear:

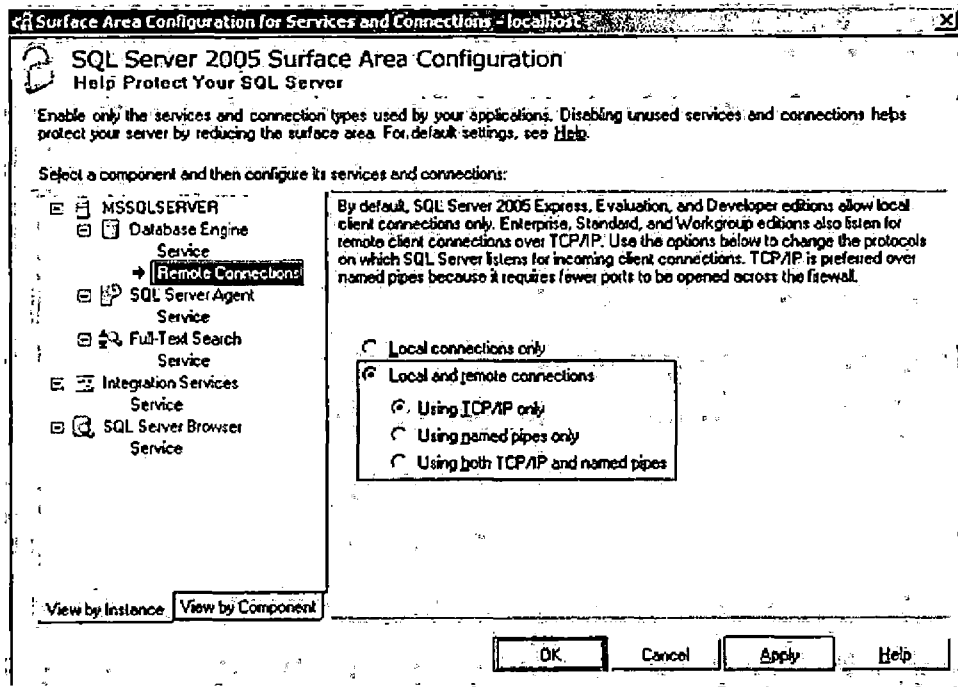


Fig.66 SQL Server Configuration

Click on the Remote Connections node in the left hand tree pane, then click on Local and remote connections.





## Deployment and Configuration

DSFW uses copy web site, a new technique provide by ASP.NET2.0, to deploy. An advantage of Copy Web Site is that it provides the options to deploy to the File System, the Local IIS, the FTP Sites, and the Remote Sites. Please see figure 68.

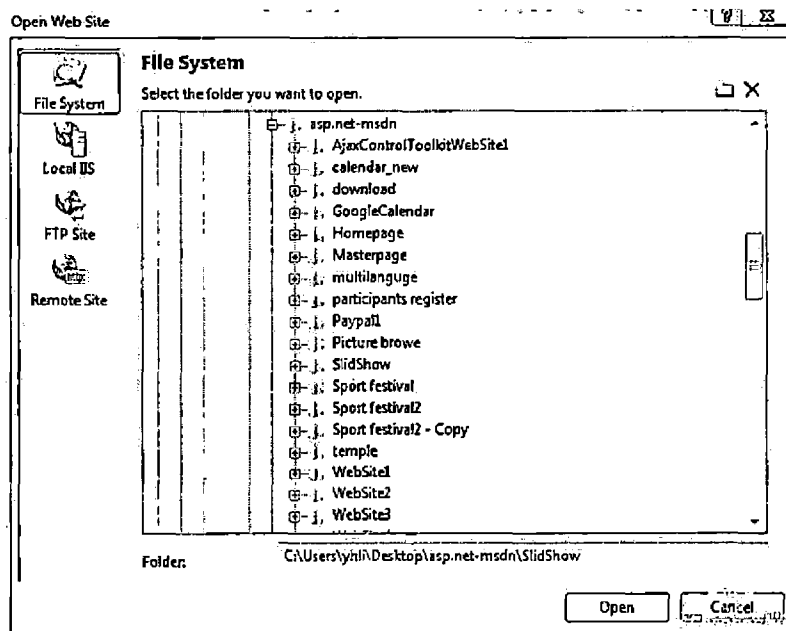


Fig.68 Copy Web Page

Copy the entire site (including subdirectories) to the virtual directory which already exists in IIS man agefile on the DSFW server.

## Windows Permissions

In order to access an ASP.NET web site, these accounts must have windows permission on the virtual directory. Right click on the virtual directory you have just created and choose Permissions option like below. Now, give the appropriate windows permissions to ASPNET or Network Service. (Figure 69)

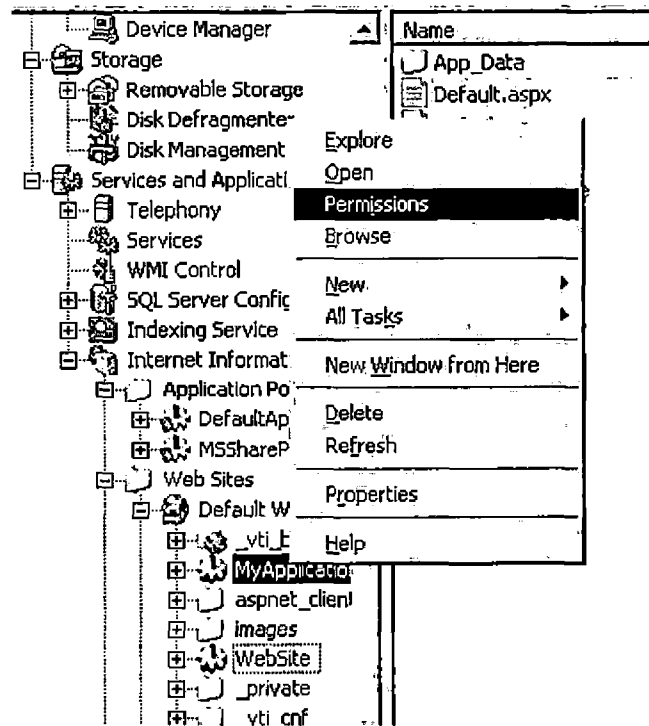


Fig.69 Window Permission

## CHAPTER SEVEN

### CONCLUSION

In this project, a website, DSW used by Disability Sports Festival was built in the framework of .NET. The website complies with the client requirements and has incorporated the feedback from DSF committee. Compared to the older version, this new website significantly facilitates the interactions between participants and organizers in the following aspects. Firstly, users can easily access the updated information about sports and physical activities throughout the year by checking the calendar of events. Secondly, the online registration and form download are available in the website for DSF participants and volunteers. They can either register online or fill and mail the downloaded registration form. Thirdly, user experience will be greatly enhanced through visual multimedia including slideshow and videoshow of disability sports festive scenes. Fourthly, integration of Paypal makes the donation process more accurate, efficient, and securer. Finally, the system administration and maintenance become easier and more efficient through web-based administration.

The focus of the future work is to enhance the capacity of administration, such as adding a pay-through-Paypal-page function (redirect donators to the DSF-customized Paypal page).

## REFERENCES

- [B1] Zhu, A. H., and He, H.Y., "Research and Realization of a Centralized Document Management Model Based on ASP.NET," *2009 International Symposium on Intelligent Ubiquitous Computing and Education*, pp.45-56, 2009.
- [B2] Ahuja, S.J., and Clark, R., "Comparison of Web Services Technologies from a Developer's Perspective," *Proceedings of the International Conference on Information Technology: Coding and Computing*, pp.3-5, 2005.
- [B3] Miller, G., *.NET vs .J2EE*, 2d ed. New York: Communications of the ACM, 2003, pp.25-36.
- [B4] .NET Development, MSDN Library  
<http://msdn.microsoft.com/en-us/library/default.aspx/>.
- [B5] Williams, D., *Pro PayPal E-Commerce*, CA: Apress, 2007, pp.20-56.
- [B6] ASP.NET AJAX Control Toolkit, The Official Microsoft ASP.NET Site, <http://www.asp.net/>.
- [B7] Murach, J., and Boehm, A., *Murach's ASP.NET 2.0 Web Programming with C# 2005*, CA: Apress, 2005, pp.35-57.
- [B8] Brill, G., *CodeNotes for .NET*, New York:Random House Inc, 2003, PP.28-32.
- [B9] Woolston, D., *Pro Ajax and the .NET 2.0 Platform*. CA: Apress, 2007, pp.56-78.
- [B10] Liberty, J., *Programming C#: Building .NET Applications with C#*. MA: Addison-Wesley, 2005, pp.55-69.

- [B11] Sams, B.F., *Teach Yourself SQL in 10 Minutes*.  
Bakersfield: Manning Publications Co., 2004, pp.23-53.
- [B12] Tulloch, M., *IIS 6 Administration*, Belmont:  
McGraw-Hill Osborne Media, 2007, pp.45-98.
- [B13] Goldberg, K.H., *XML: Visual QuickStart Guide*,  
Los Angeles: Peachpit Press, 2008, PP.36-59.
- [B14] Windows Server 2003 Tutorial Website,  
<http://www.visualwin.com/>.
- [B15] Microsoft Office Website,  
<http://www.microsoft.com/security/>.