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Sales Management Portal

Syed Abdul Naseer
Governors State University

Syed Sohail
Governors State University

Gade Bala Vamshi
Governors State University

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ABSTRACT

The objective of this project is to develop a sales portal which would be used as a platform for selling the courses of Han Academy Naperville to the parents and prospective students in the community. The parent and guardians of the students can select any specific course which is available in school portal to find out detailed information, the portal will log enquires and contact information. Then it should be very easy for parents to select the courses and register the courses they can also fill out all required details and complete the process on just a few clicks. The course portal system should automatically synchronize with existing course management portal of 'Han Academy Naperville'. This course management portal should be developed using an open source technology like PHP and Moodle.

The main purpose is to create an interest among students so their parents or guardians can choose according to the students' academic standings. The sales portal will be focused on managing pipelines along with marketing tools and various learning options which will be directly connected and displayed on the course portal. The variety of options available at the portal will encourage parents/guardians to help the student be successful in school.

Keywords: Moodle, PHP, Sales Portal, LMS

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1 Project Description

HAN Academy Naperville has its own learning management portal where students can access the course after registration in a course.

Course registrations are provided through a Google Forms. Google forms registration data are saved in a simple excel sheet file. Maintaining Excel sheet and get updated registration details is difficult for admin. Admin need to access Google form data from Google server through Google account.

Another main issue of HAN Academy LMS website is very simple. User experience is very bad. Website is not attractive for user or parents. Courses information are in short. . The sales management portal allows parents to buy courses for their students. The parent and guardians of the students can select any specific course which is available in school portal to find out detailed information, the portal will log enquires and contact information. Then it should be very easy for parents to select the courses and register the courses they can also fill out all required details and complete the process on just a few clicks.

1.1 Competitive Information

Developing Learning Management System in a Moodle technology is quite simple and time saving. Because Moodle provides the ready modules and classes for web functionalities like sign in, sign out, sign up, maintaining courses and students etc. various LMS technologies like Desire2Learn, Canvas. It's learning etc., are the competitive but Moodle is quite user friendly.

1.2 Relationship to Other Applications/Projects

Moodle system will integrate with HAN academy Moodle system where parents can register their child in a course and if in case parent doesn't like course can drop out at their end any time.

1.3 Assumptions and Dependencies

Assuming that current system is working fine, proposed system is dependent on current system where course and other teaching materials can be managed by admin.

1.4 Future Enhancements

In future, we can provide a mobile app on Android and Apple platform which makes more users friendly and easy to reach at any time. Moodle also provides the mobile app development libraries.

2 Project Technical Description

2.1 Application Architecture

The rapid prototype serves as a visualization tool for both developers and client. In this scenario where we want to develop a system admin to manage news, registered user and view contact information's of parents. It also helps parents to view course details and register in their child in a single or multiple courses. System allows the parents to drop child from course at any time.

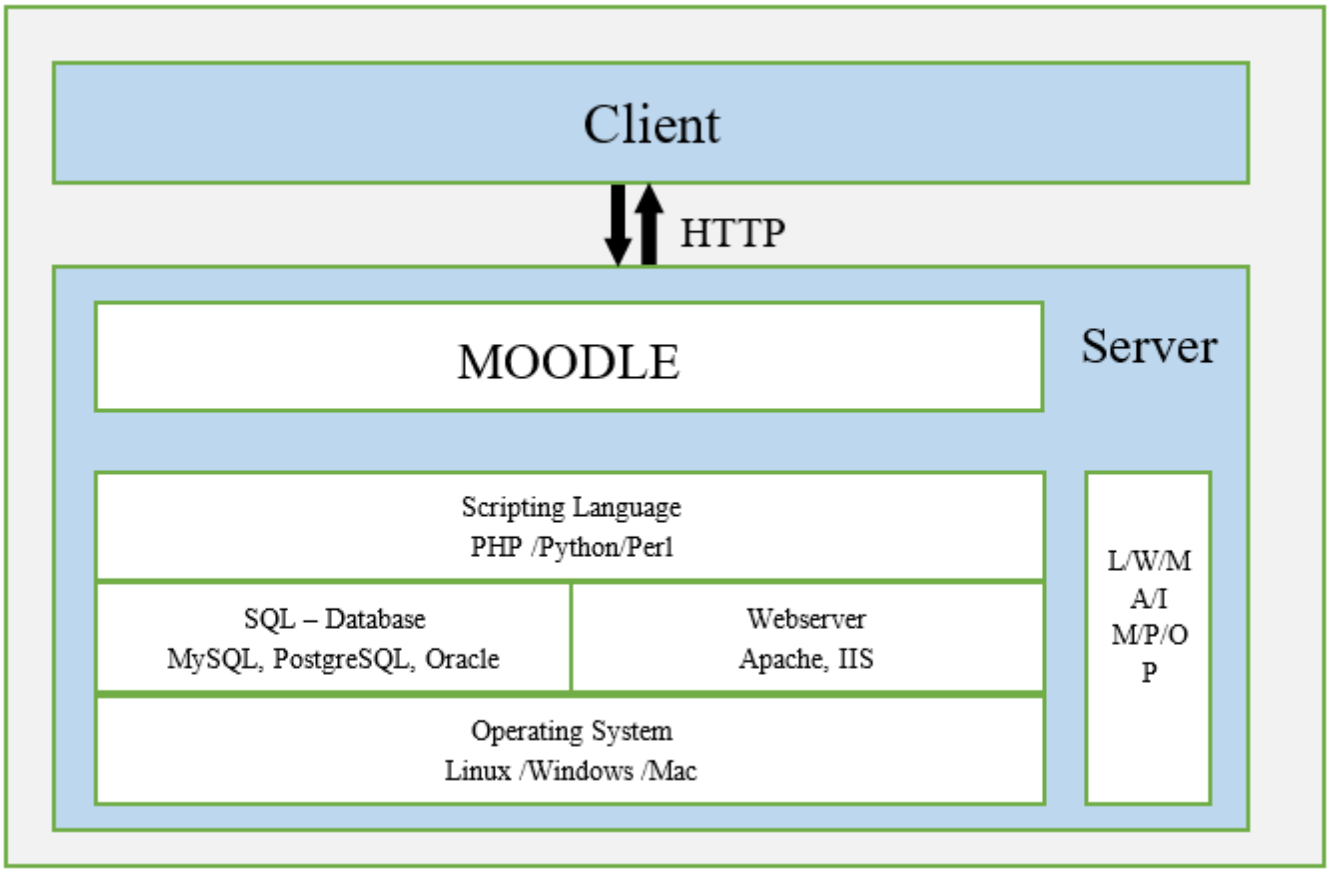


Figure 1 Application Architecture

2.2 Application Information flows

Parents need to visit the site to register their child in a course, where they can view different courses and their complete schedule and details. Parent need to register himself to register their children in a course. Parents can register their child in one or multiple course.

If parent wants to drop the course for any reason they have choice to drop the course at their end.

Following is a basic structure for proposed system.

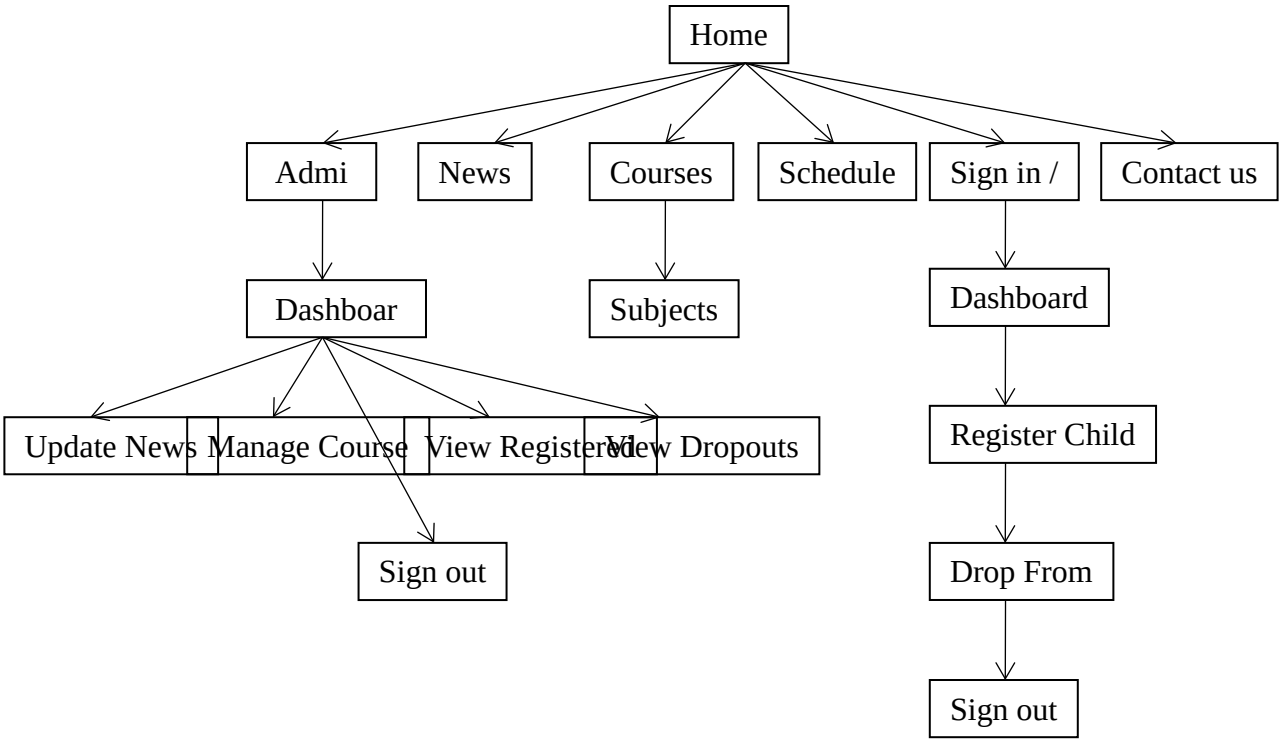


Figure 2 Application Structure

2.3 Interactions with other Projects (if Any)

The proposed system is not interacted with any other system.

2.4 Interactions with other Applications

Proposed system is interacted with the current application which is already deployed on HAN Academy server.

2.5 Capabilities

Existing system have some drawbacks like registering in a multiple course and dropping child from course is not available at client side website. At admin side website, there is a report in an excel sheet format which very difficult to handle and manage. And, the data is not secured.

Required a system where parents can visit the website and view the course and their details and register children in a course or in multiple courses. System should also provide parents to drop their children from any course at any time.

Admin required a system to upload news on regular basis on client side website. Admin also required a system function where he/she can easily see the registered students list and drop out students list. Admin also required updating course and subject details from admin panel.

Existing system has very simple and non-attractive user interface which is not attracting the end user. We need to here develop a very attractive end user site which contains all the required features to attract the user and creates a good user experience.

Admin panel should be easy to use and with all the functions and reports in it.

2.6 Risk Assessment and Management

This section is used to identify as early as possible some of the risks that are associated with the introduction of this project. It should also contain recommendations to eliminate or minimize these risks.

3 Project Requirements

3.1 Identification of Requirements

This project requires following installation of software's.

Project Installation

We need three things to install Moodle

- XAMPP server
- Moodle software

Downloading XAMPP server

Download the installer file for the latest version of XAMPP Server from https://www.apachefriends.org/index.html

There are three versions of a XAMPP for different platforms like windows, MAC or Linux.

Download the version as you required for server.

Run the installer after donloading it. And follow the steps.

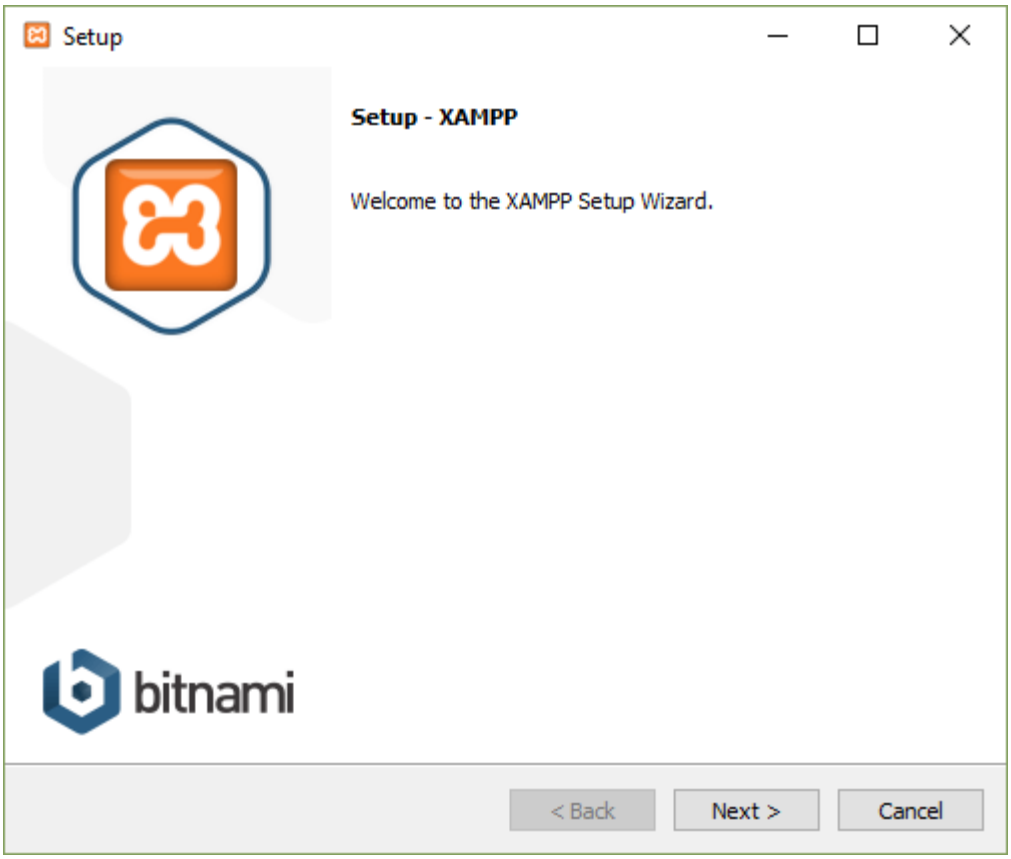


Figure 3 Setup startup

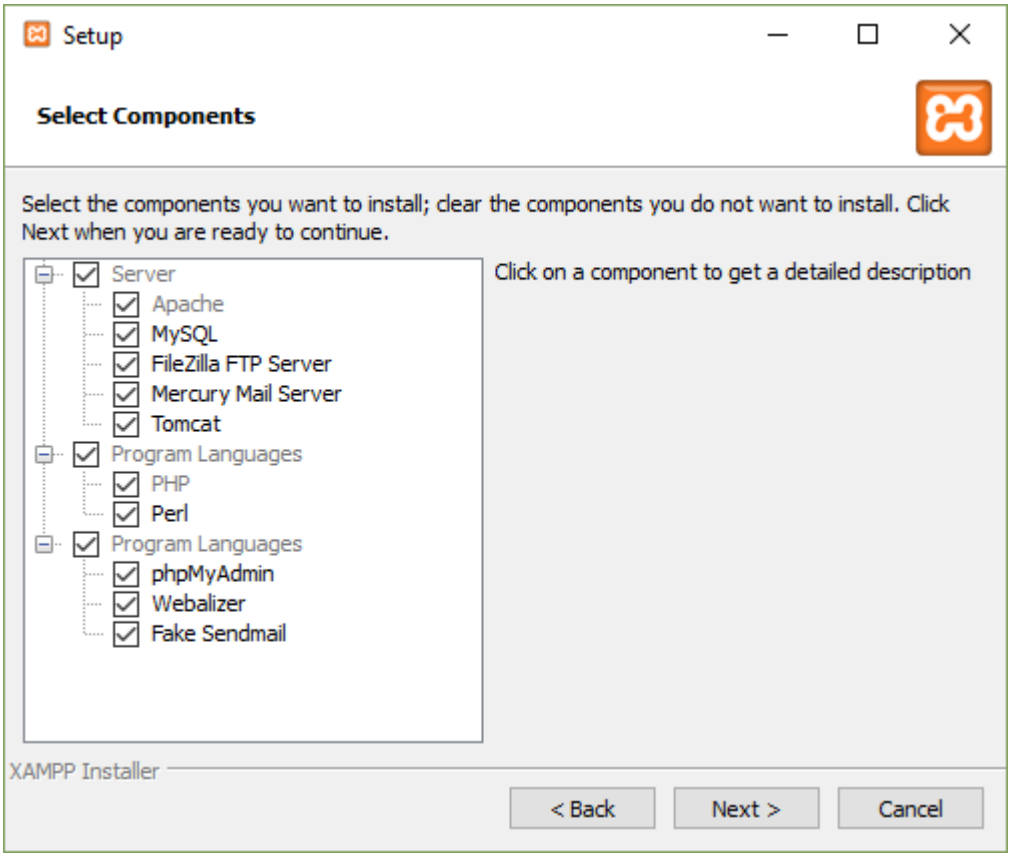


Figure 4 Component selection

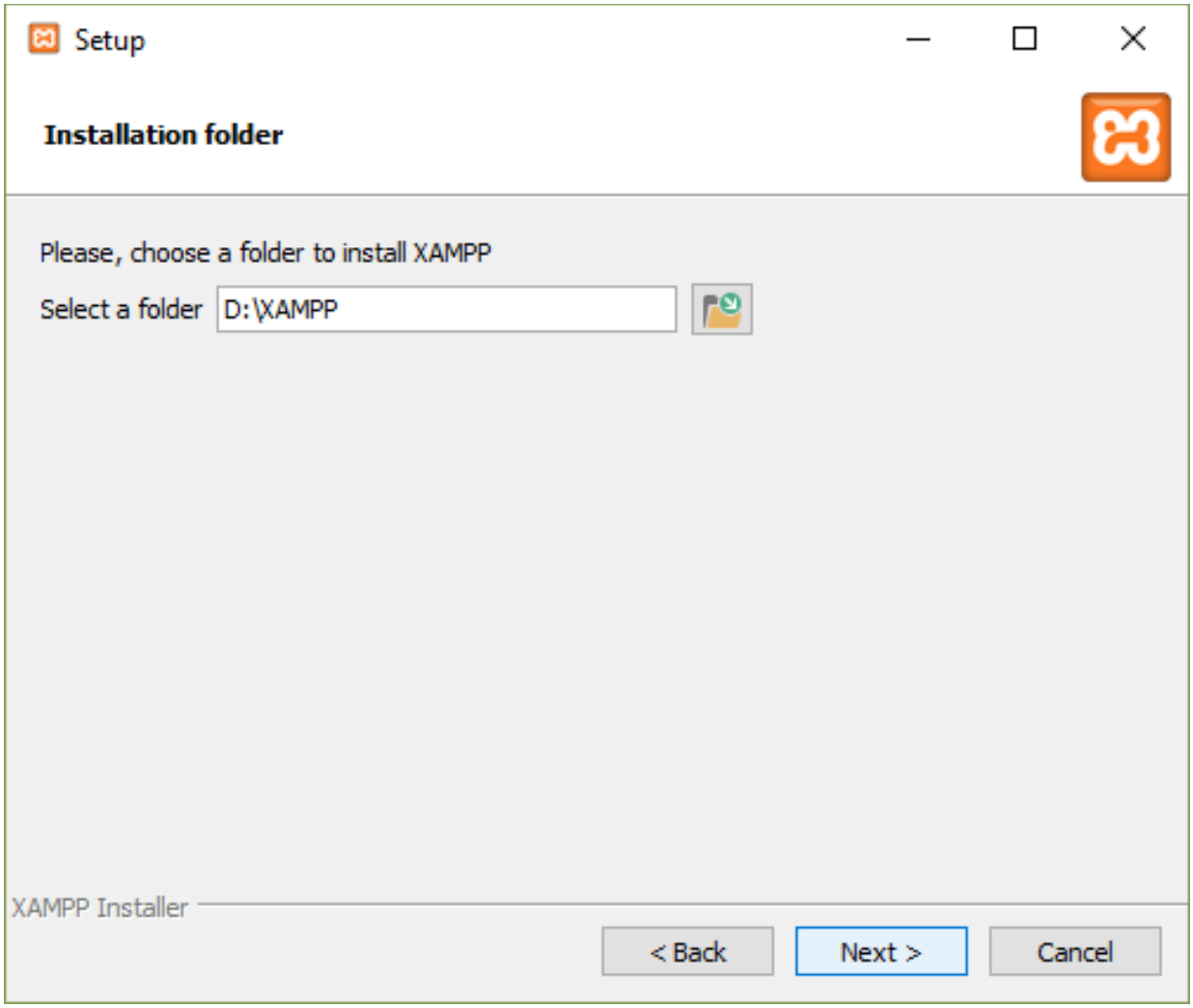


Figure 5 Path to install XAMPP server

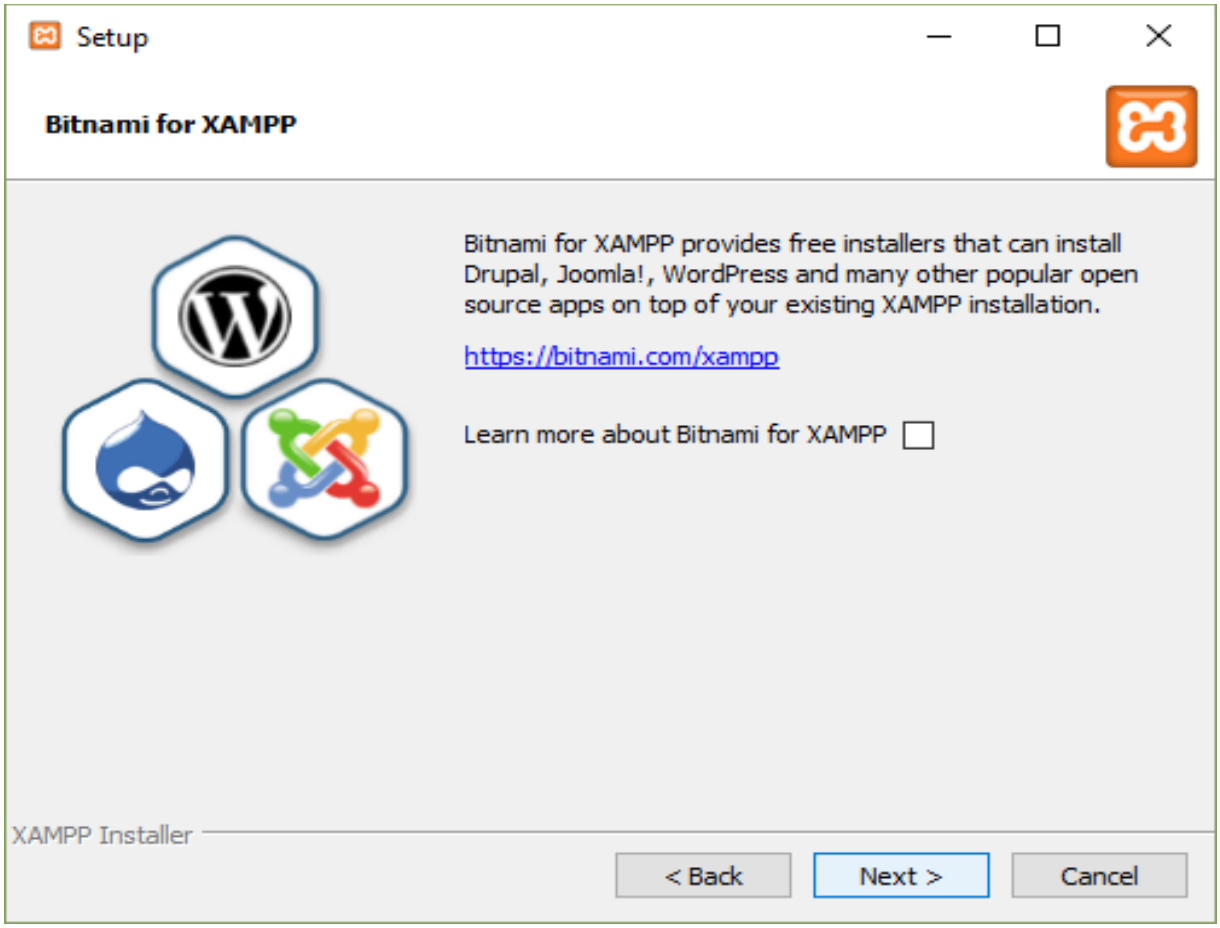


Figure 6 All configuration done

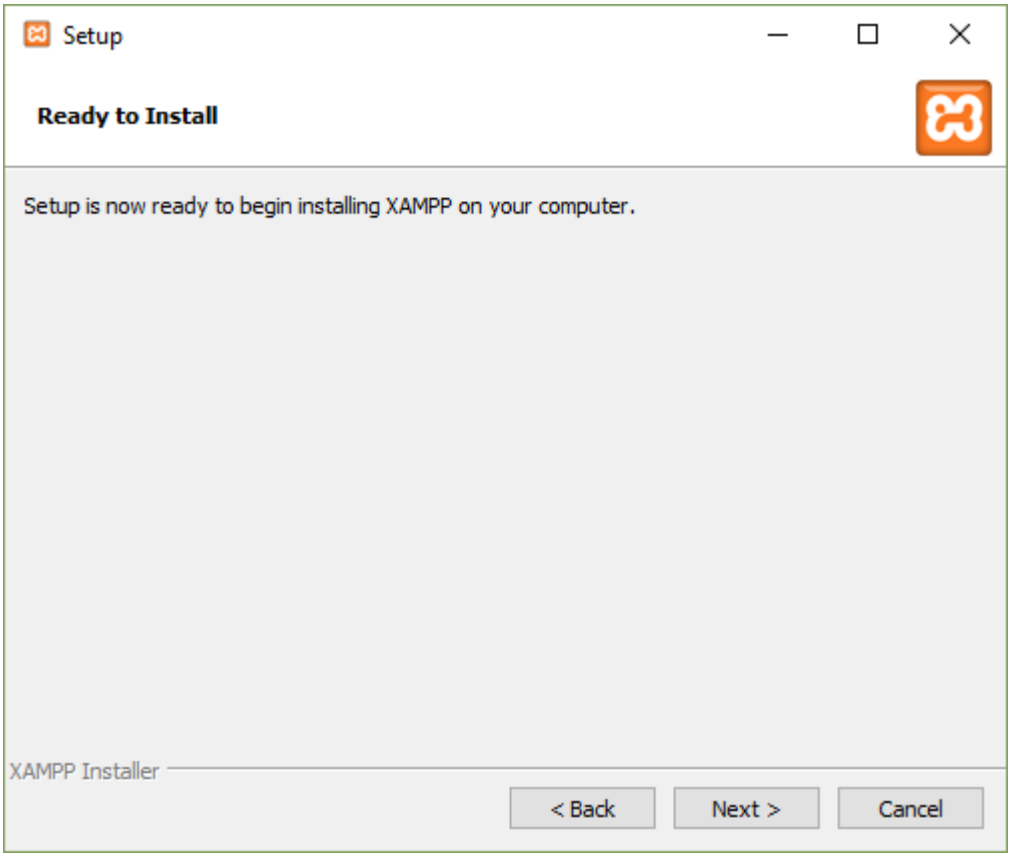


Figure 7 Ready to install

Figure 8 Installation is in progress

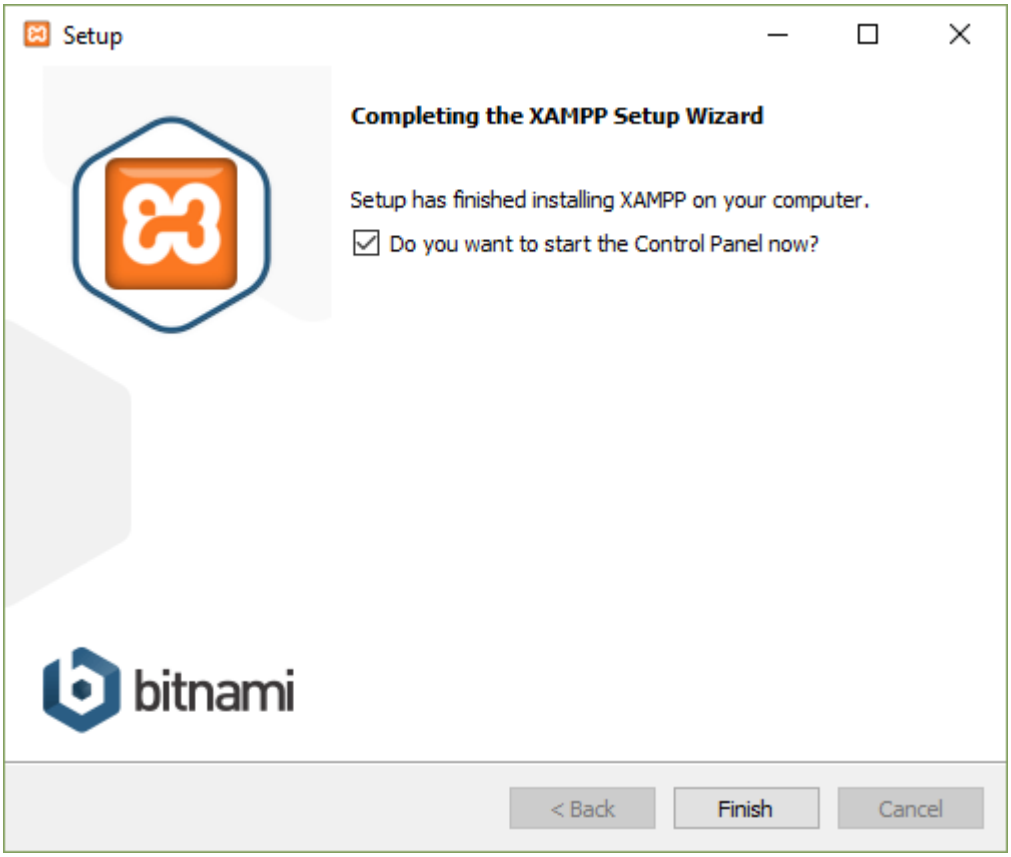


Figure 9 Completing the XAMPP installation

Click on finish it will start XAMPP control panel to start server and database services.

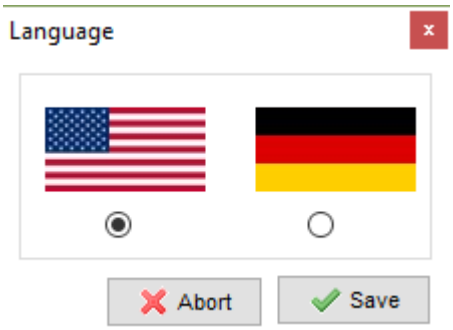


Figure 10 Control Panel language selection

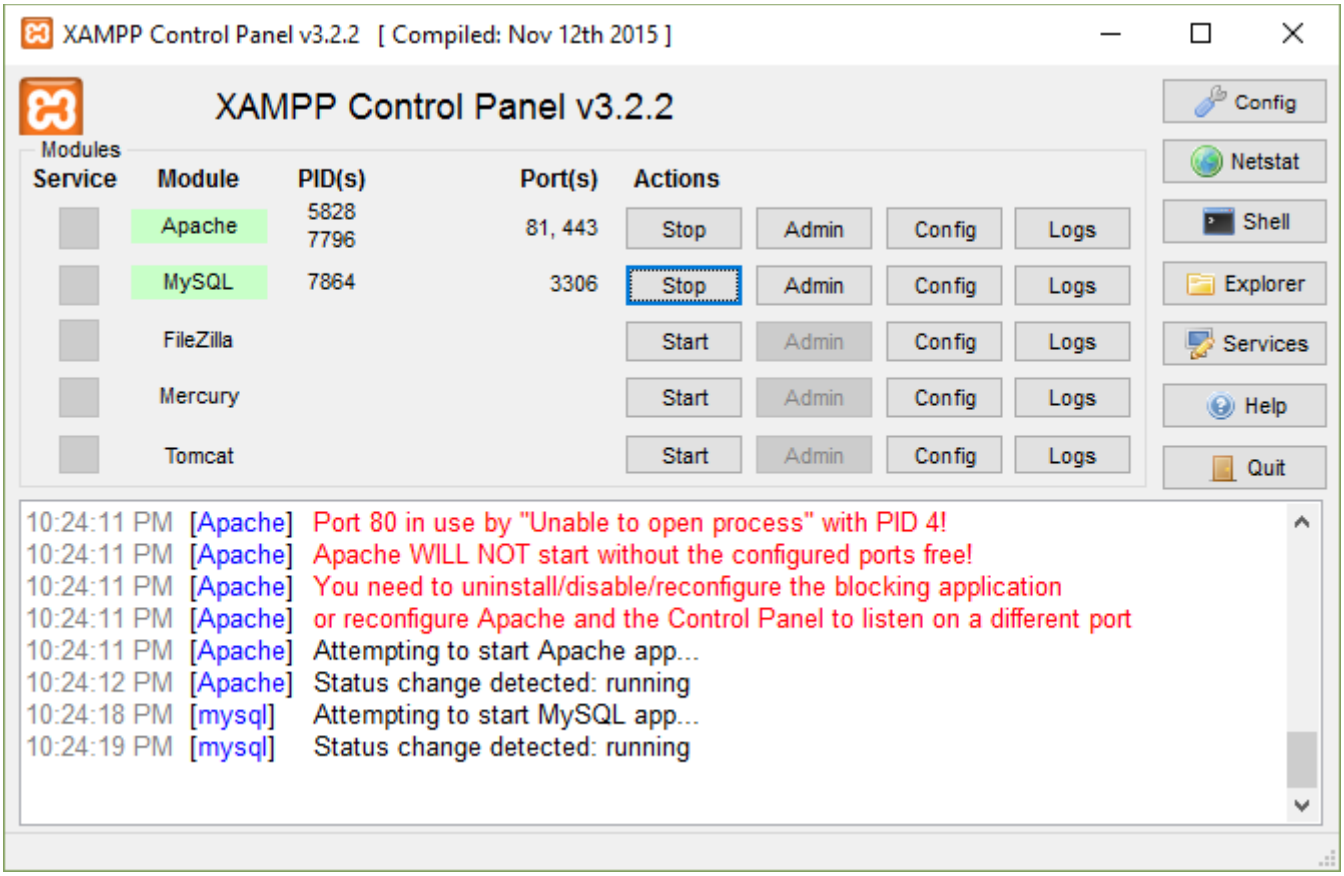


Figure 11 Starting Apache server and MYSQL

Make sure the Apache and MYSQL service should be started properly and it should get PID and Port numbers and Apache and MYSQL should get highlight in green.

Go to http://localhost/ will run the Apache server where you can access the database and configure the database.

Figure 12 Apache Server Dashboard

Click on phpMyAdmin to access the database

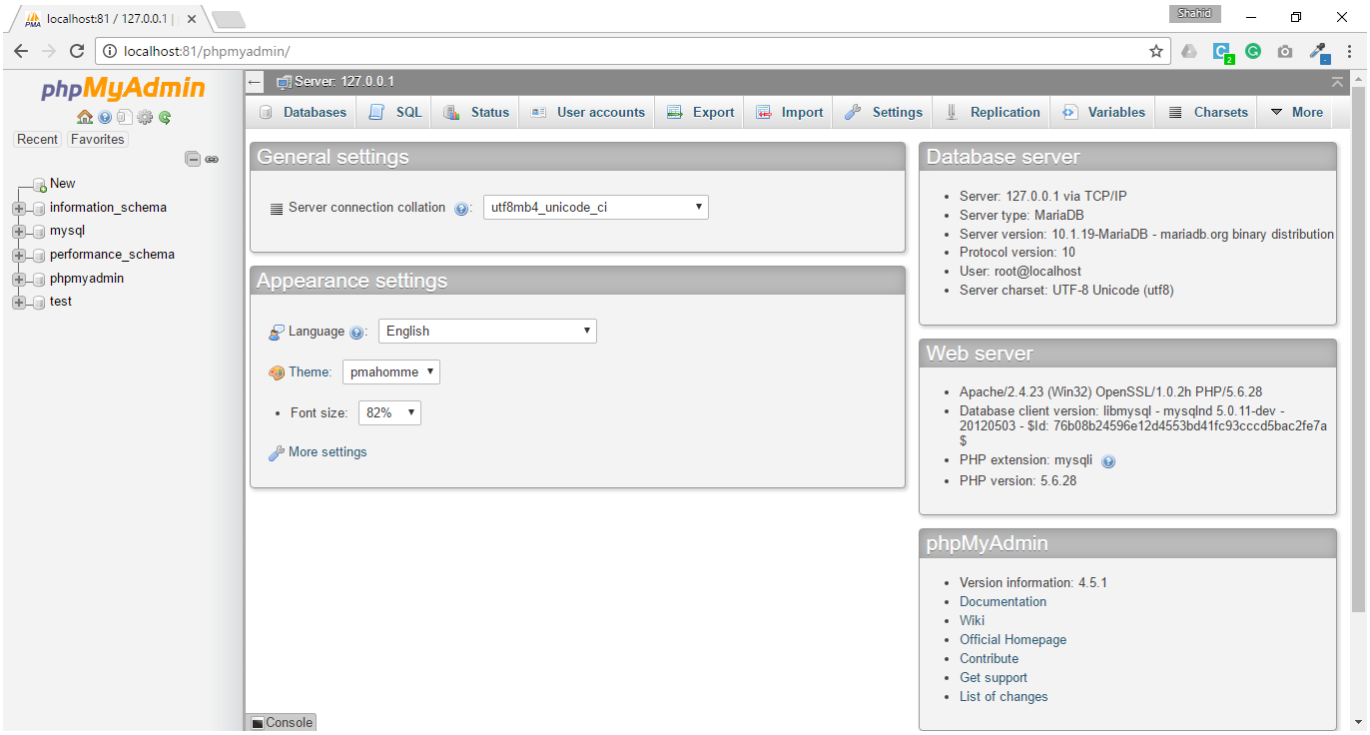


Figure 13 MYSQL Database

Go to “Databases” tab and create database. Enter database name and click on Create button.

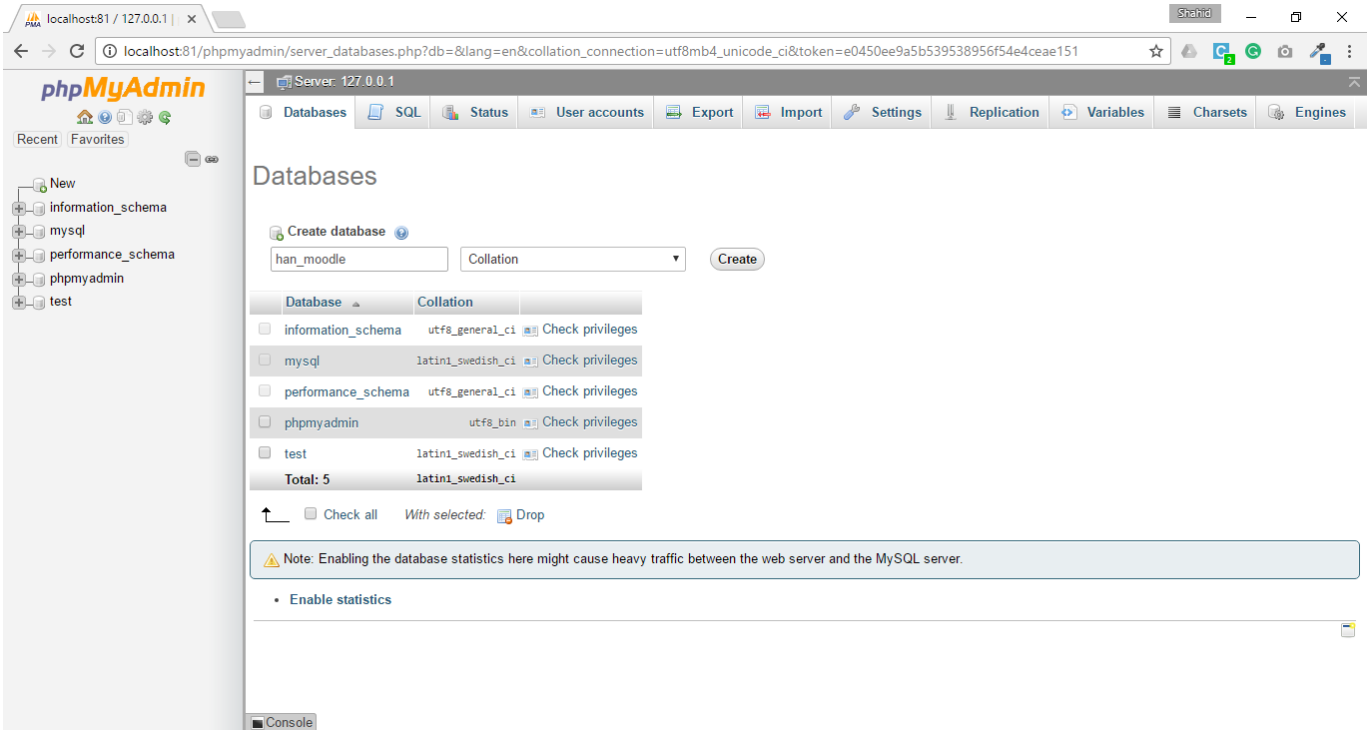


Figure 14 Creating Database

Configure database tables

Select your database and go to import, choose .sql file and click on Go

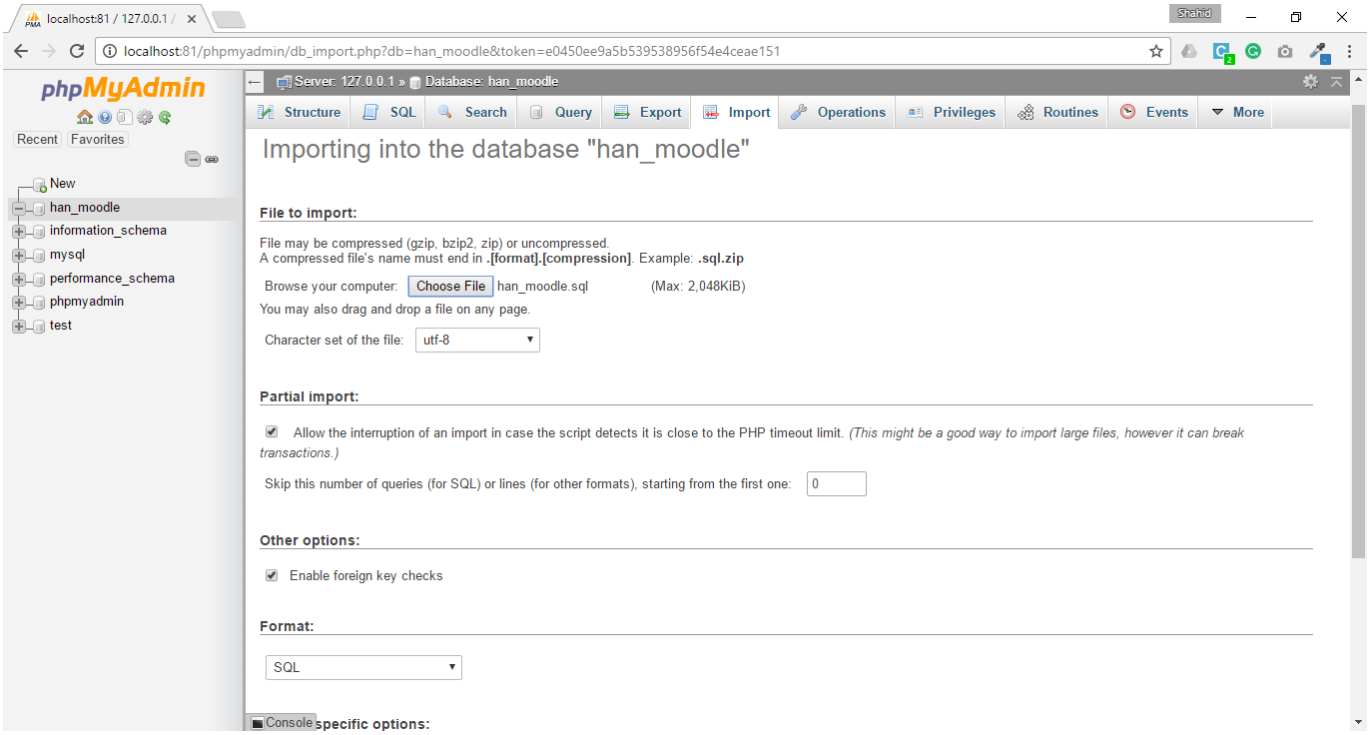


Figure 15 Importing database

Database tables are imported successfully.

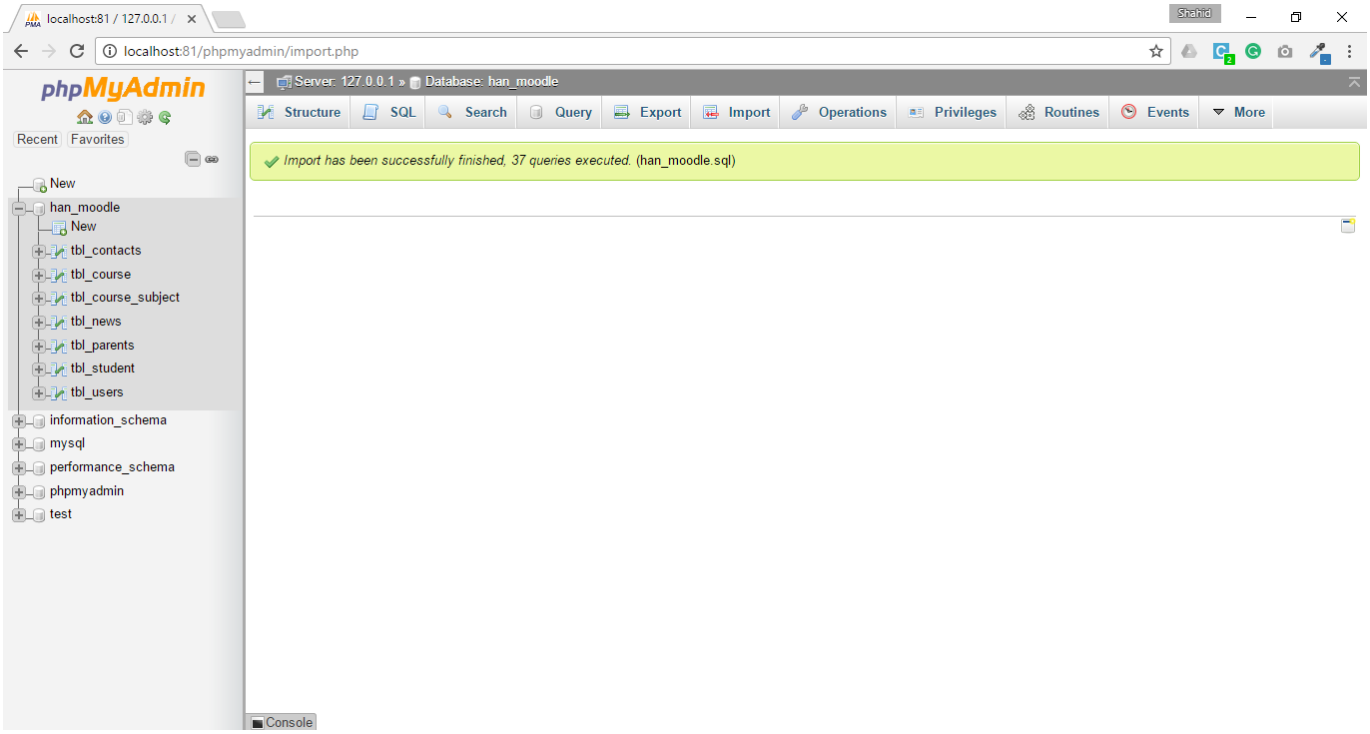


Figure 16 Importing Database Success

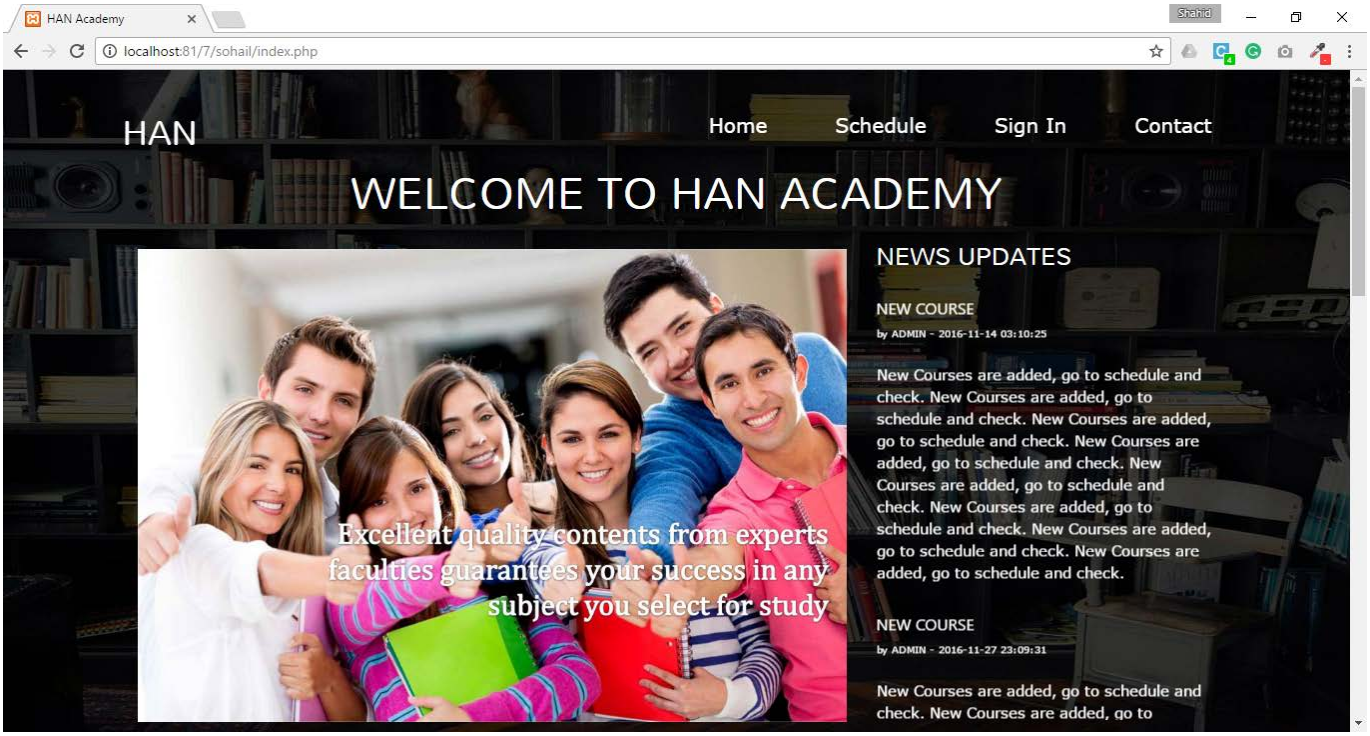
Configuring the project

Just Copy all the project files in htdocs folder to run it on apache server. Htdocs folder is a root directory for apache server.

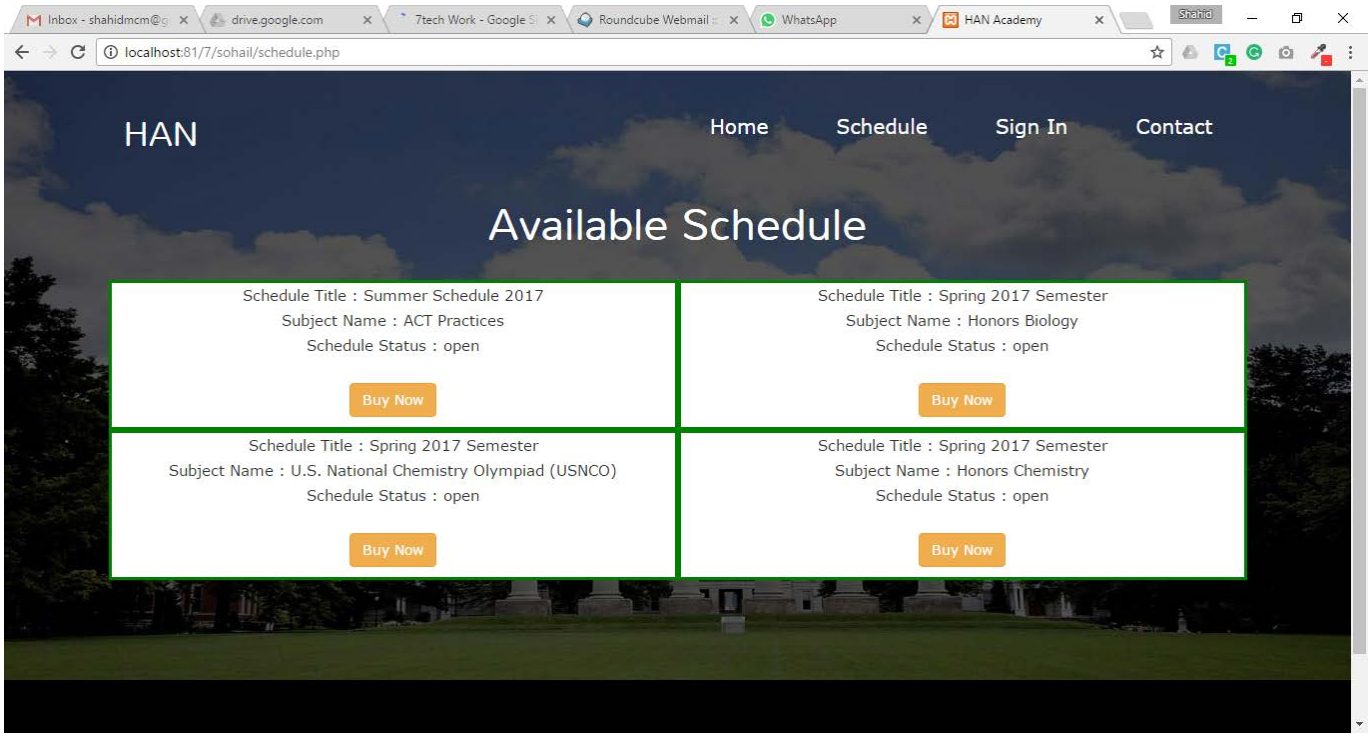
Run Project

Go to http://localhost/moodle/

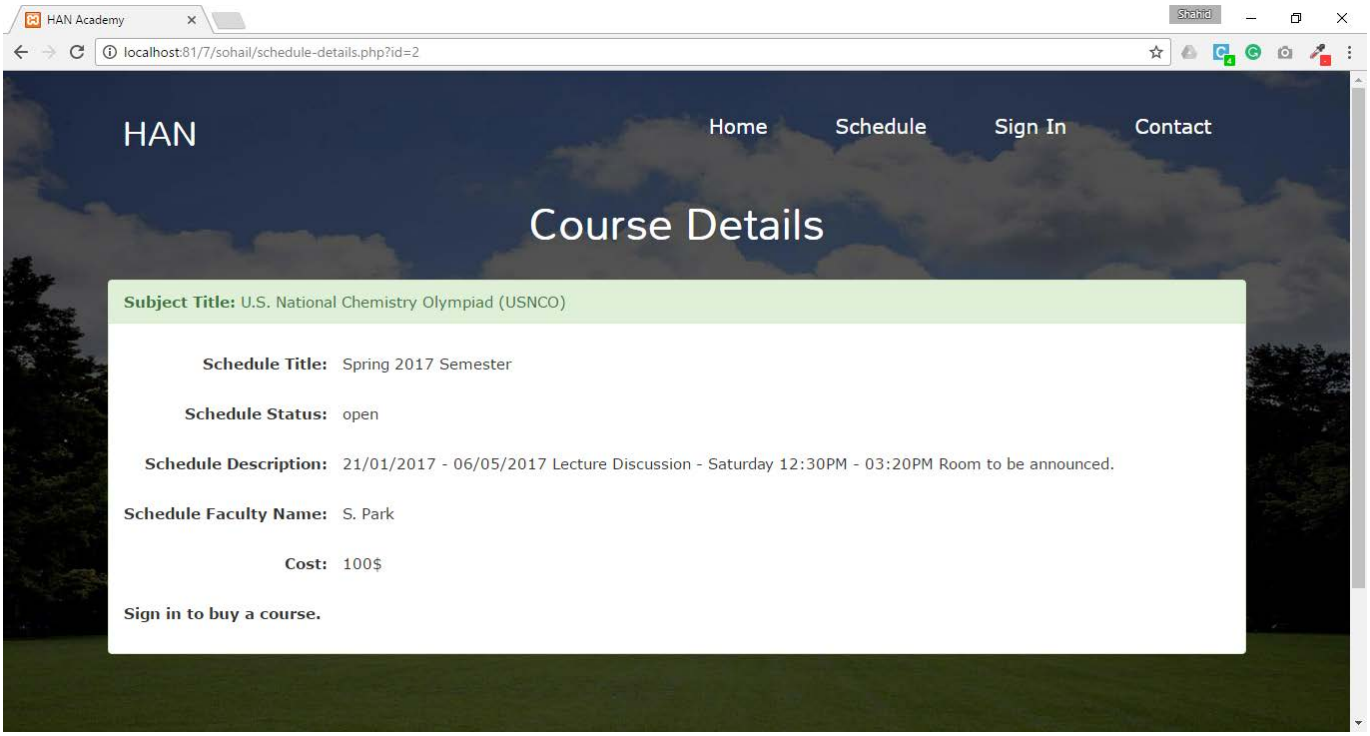
Home page Description: Home page consists of news updates and photos of the past events. News updates deals with the title of the event, event date, event description and deadline. Photos works on the past events in the academy. Later on it deals with the reviews of the past user and contact information.



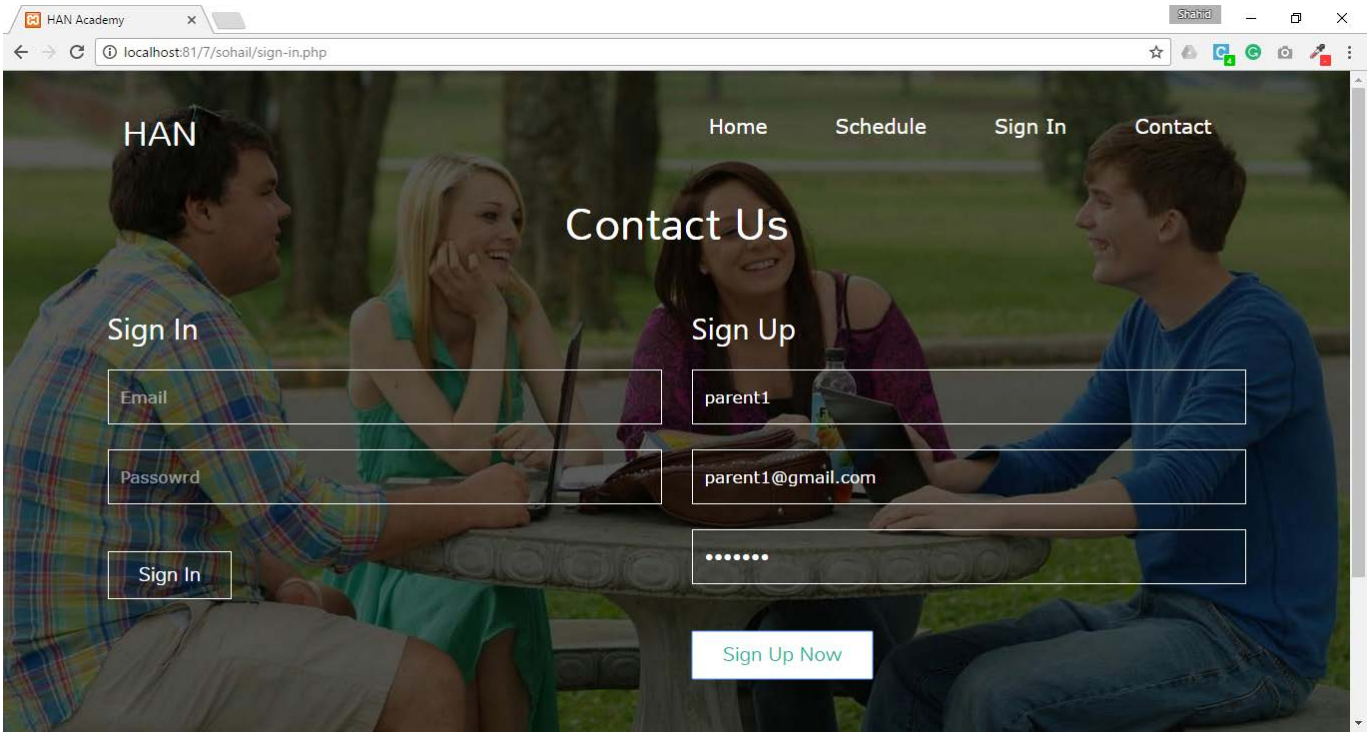
Available Schedules – It deals with the schedule number, schedule title and course subjects are listed with more link, after clicking on more link parent will get course details



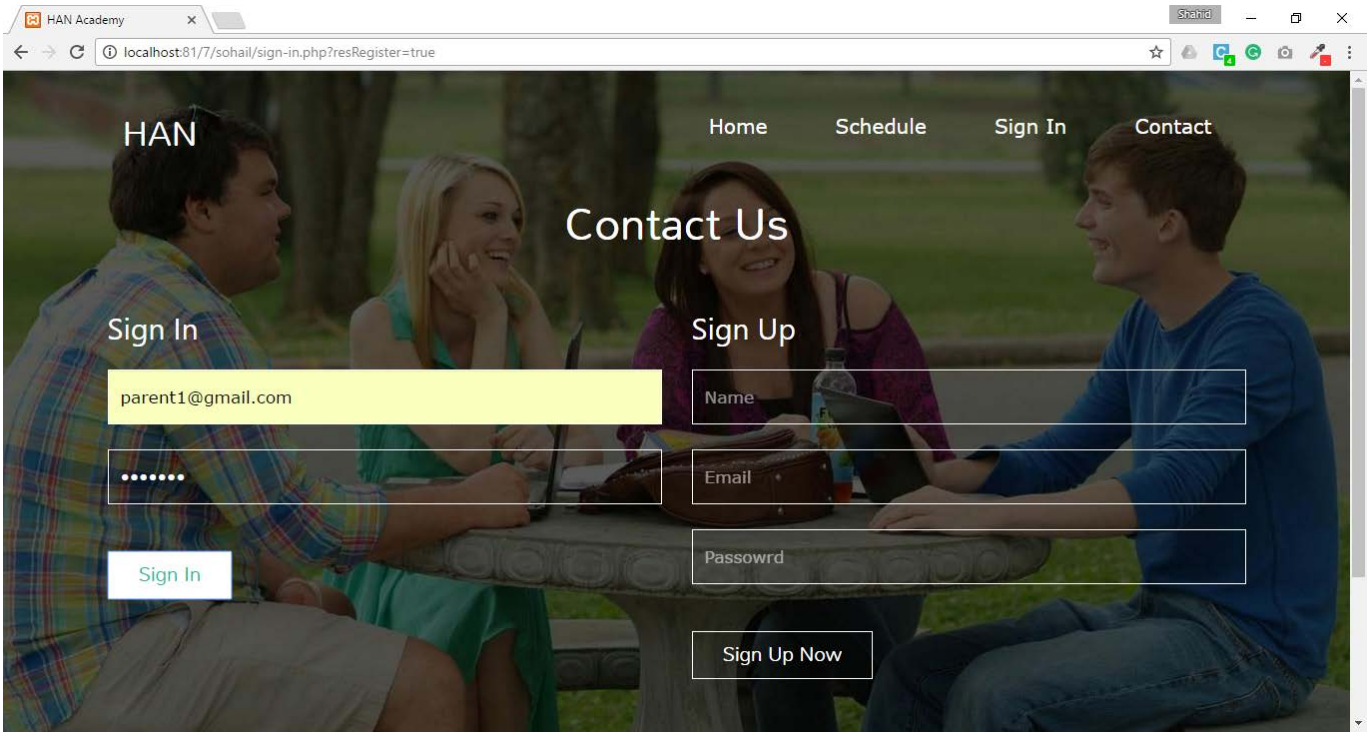
Course Details – All the details about course and schedule are mentioned here. Registering for course required sign in to the system. Click on sign in link to sign in or sign up.



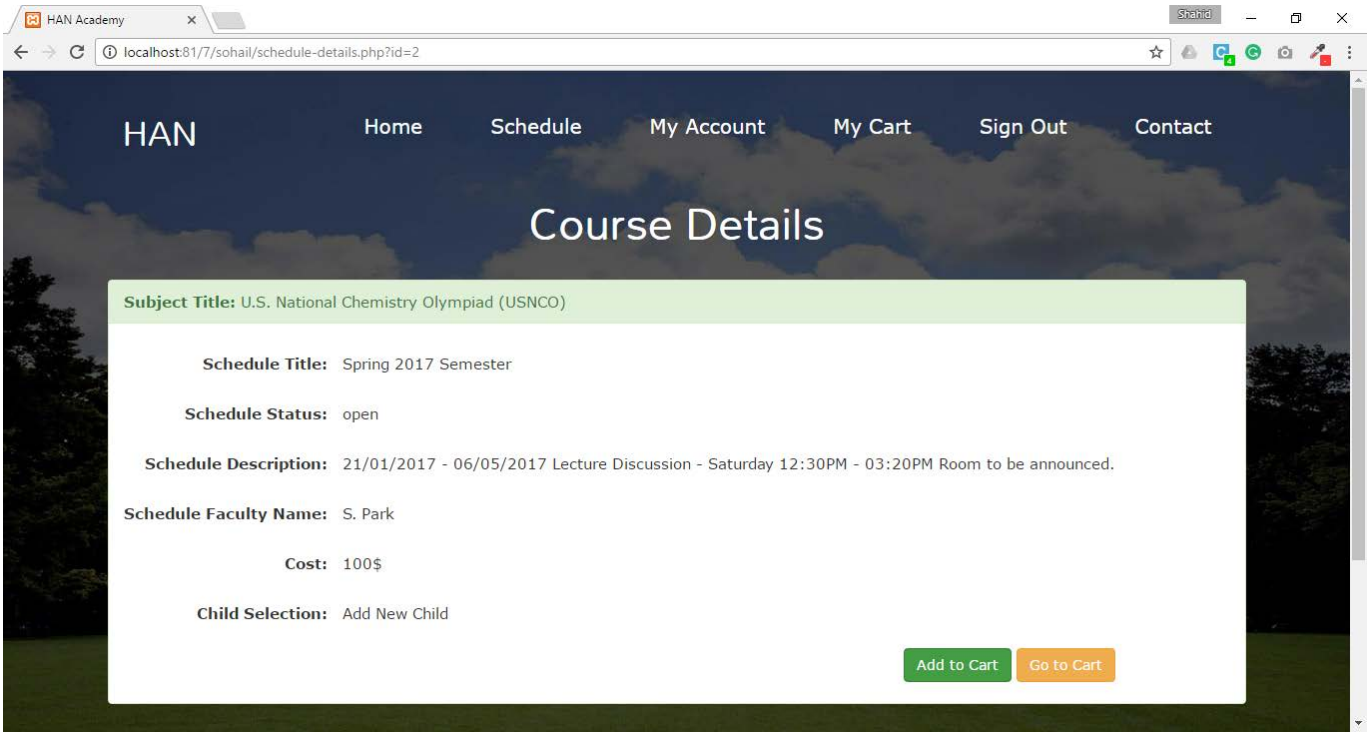
Sign in / Sign up – Parent need to sign up and after that sign-up need to sign in for course registration. It includes name, email and password.



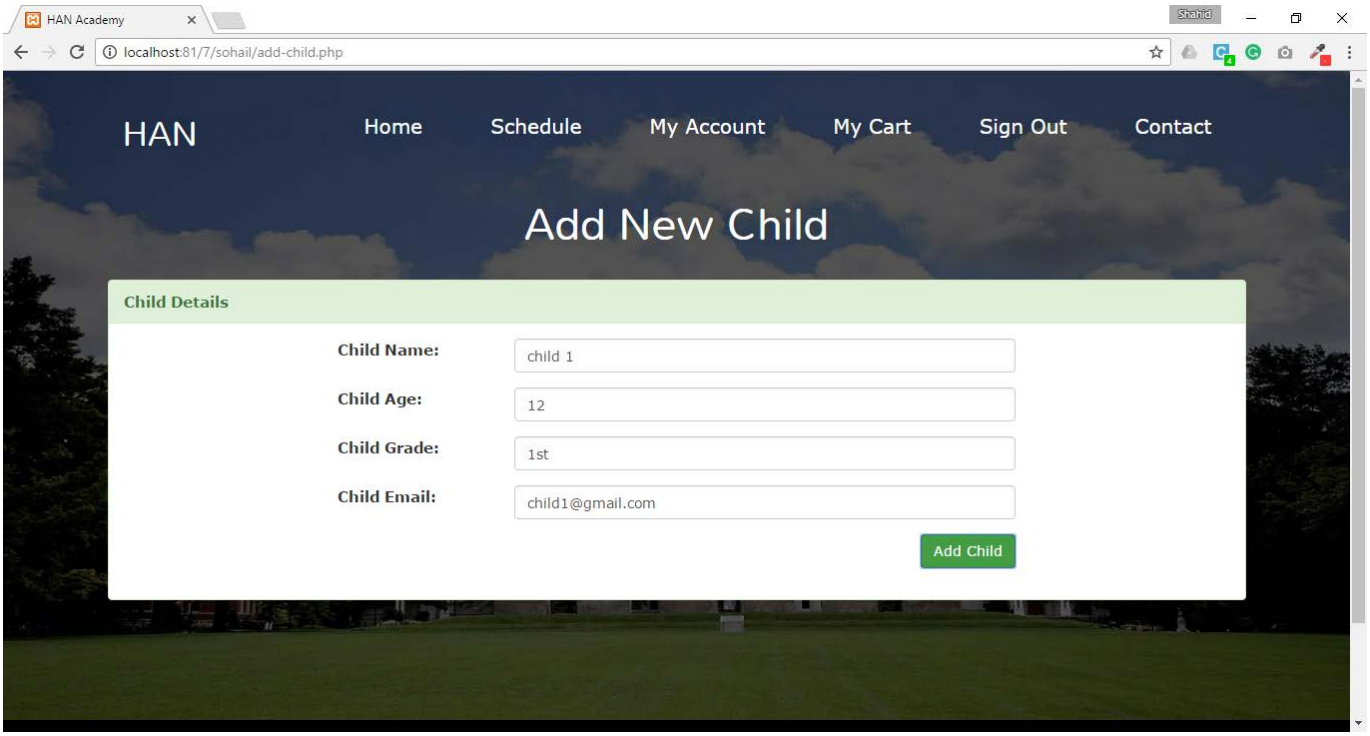
Sign in – Parent need to sign in to the system.



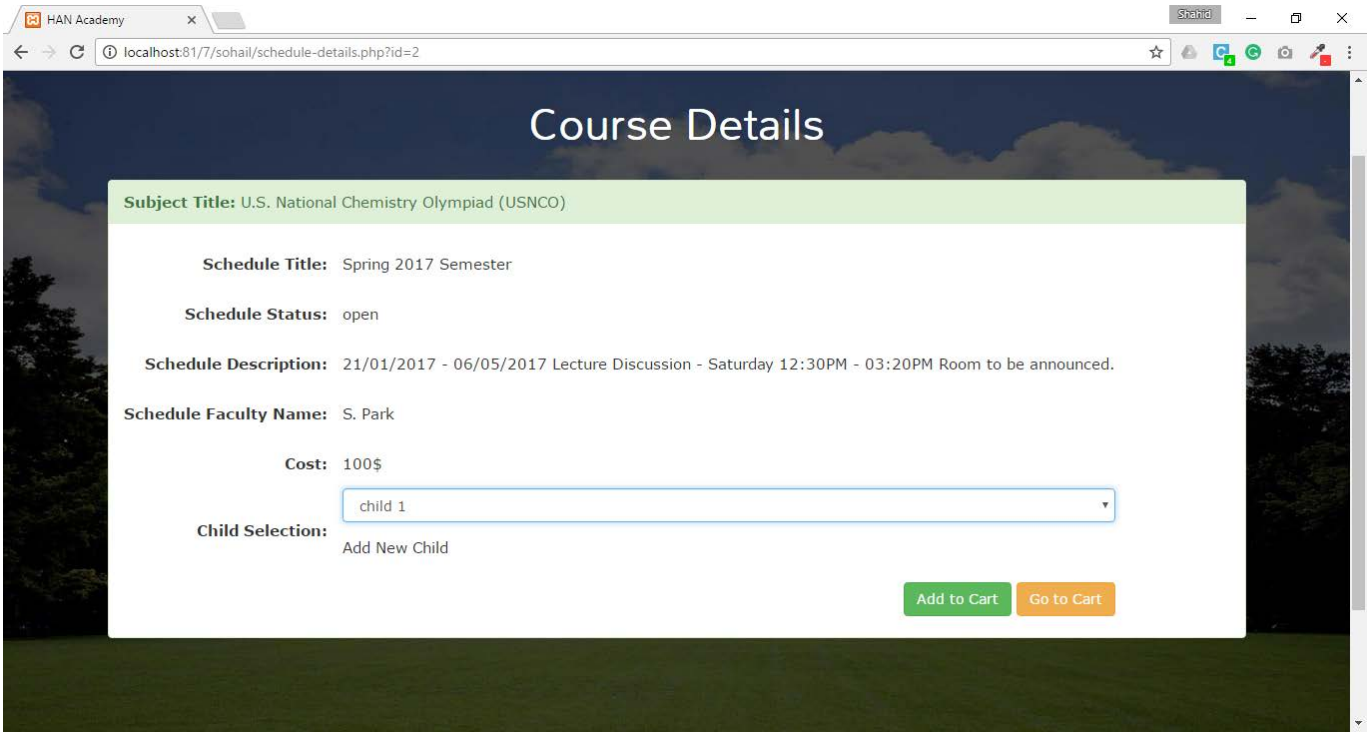
Course Details – After sign in, course details page will display button as add to cart and go to cart. Parent need to add course in a cart for registration. Before that he need to add child and select that child.



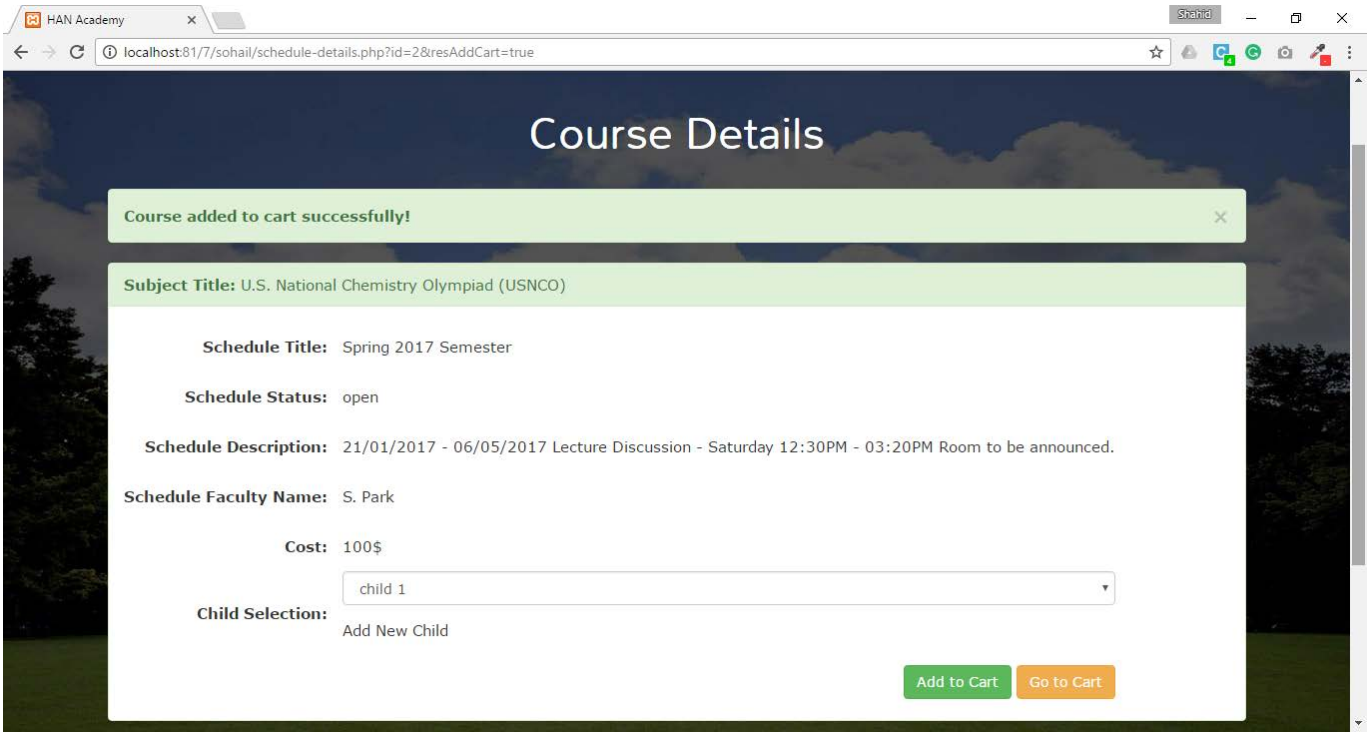
Add New Child – After clicking on Add New Child link, it display the form where parent need to fill the child information once and add child in a system.



Course Details with existing child list – One child is added, same will display in a list at child selection option. Parent need to select the child and click on add to cart button.

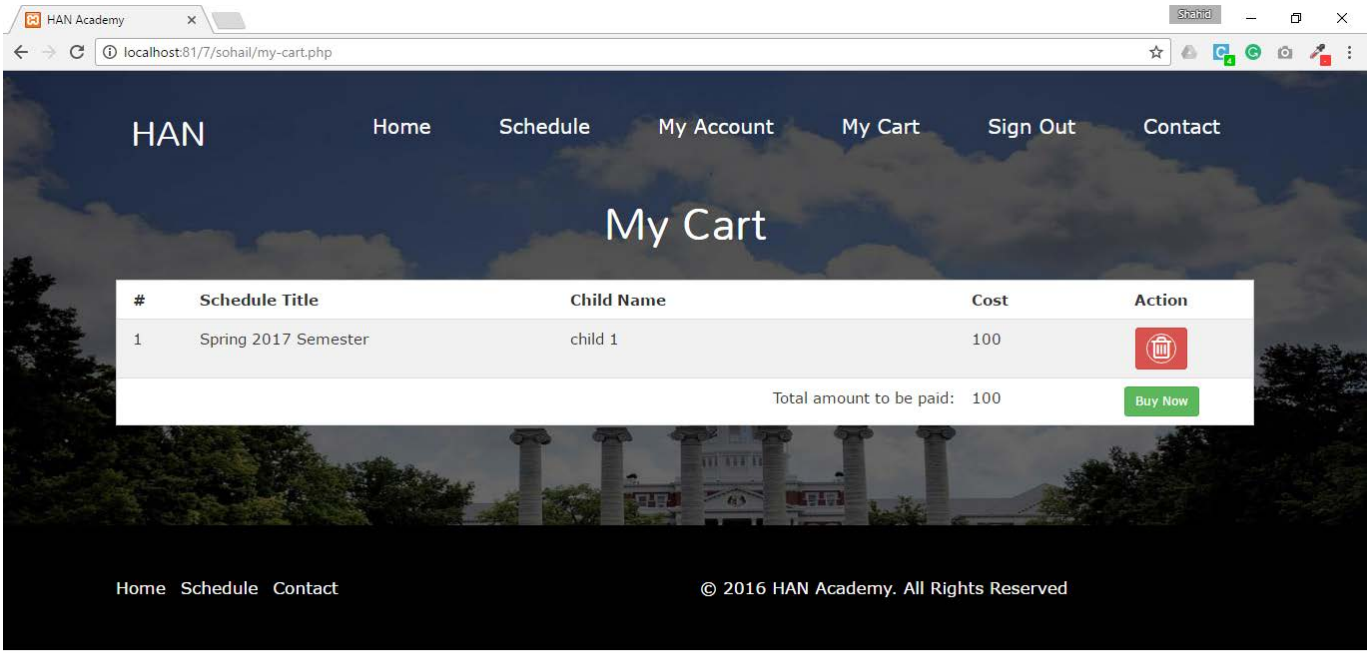


Cart Confirmation – After adding course to the cart confirmation will display.

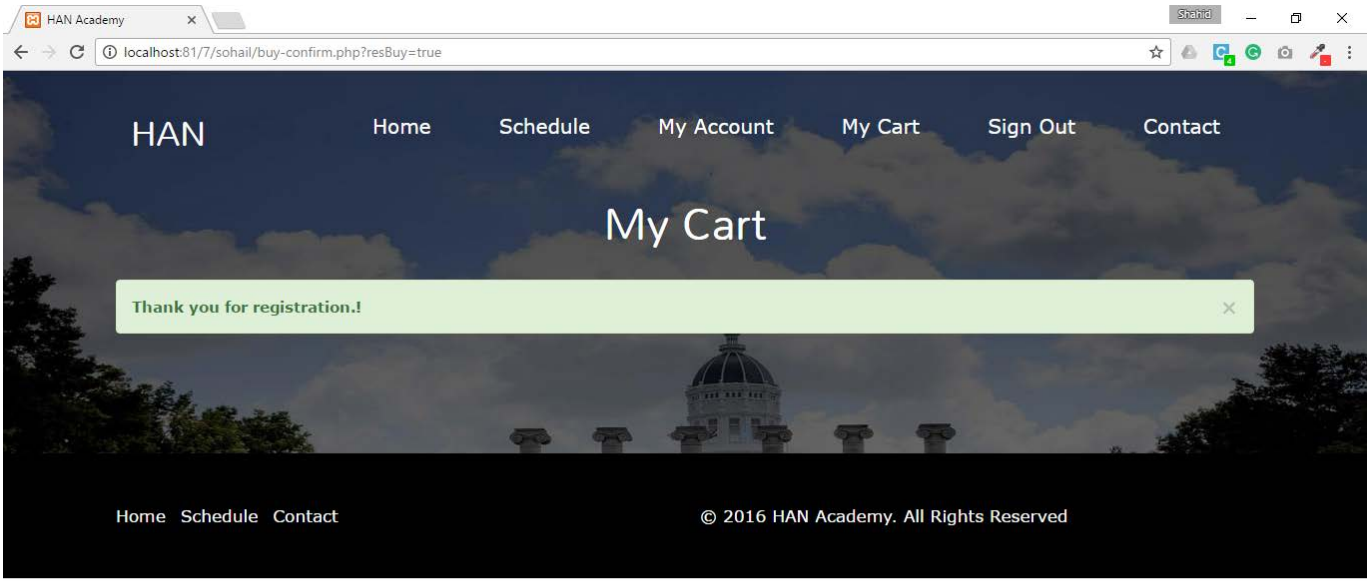


Cart – Click on go to cart button will open the below page parent's added course with child details will get display.

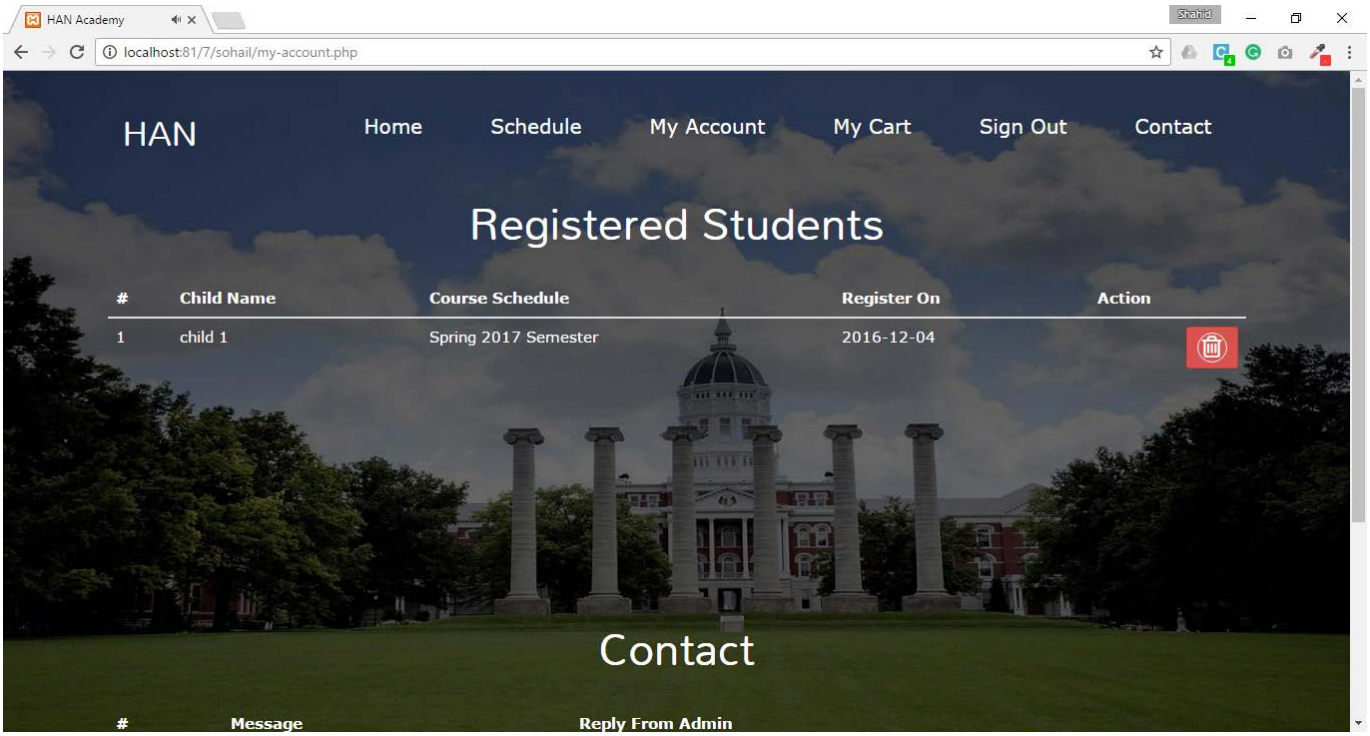
Here parent can delete the unwanted courses from cart using red trash icon.



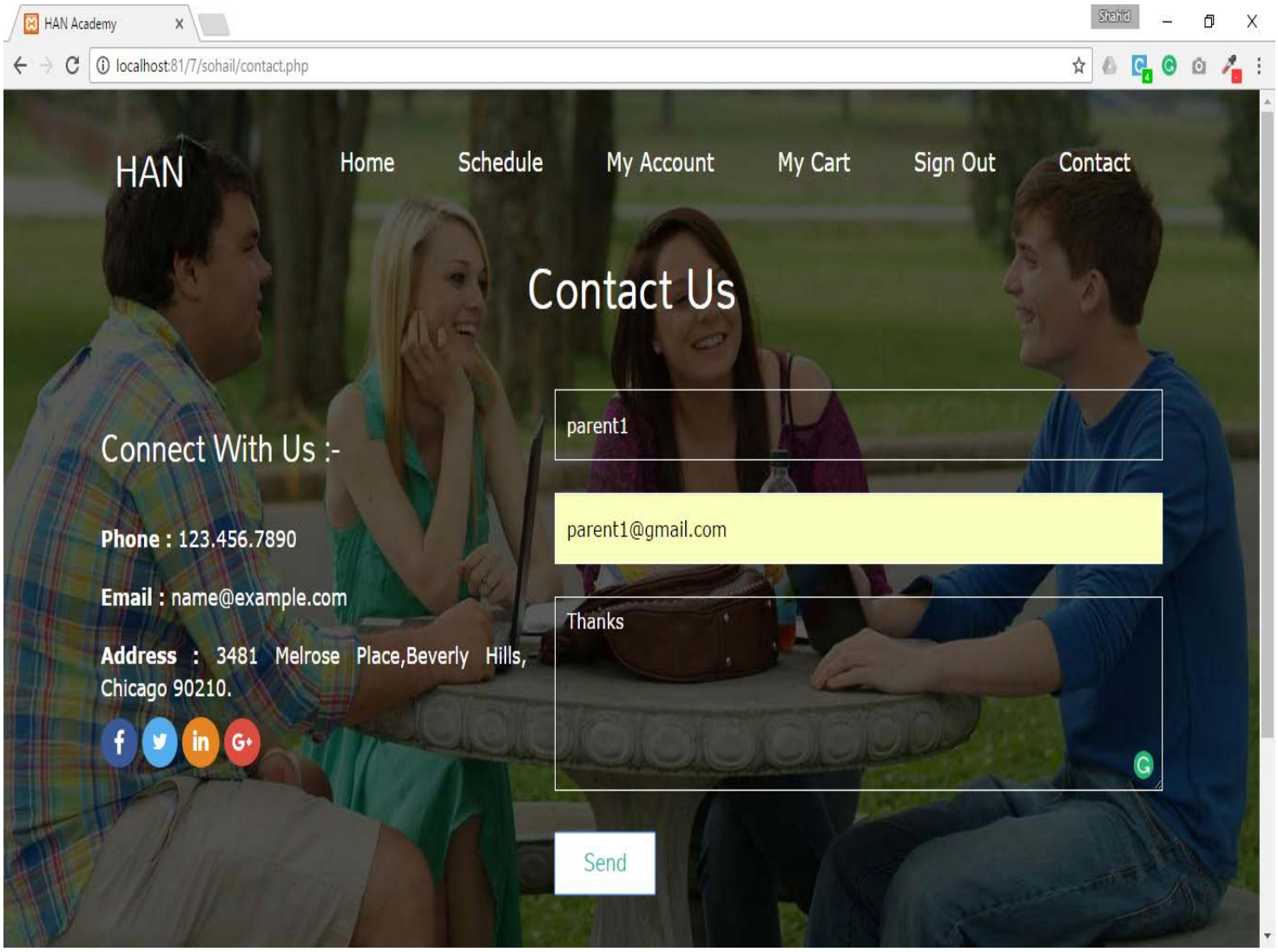
Registration confirmation – After click on Buy Now button registration confirmation would display.



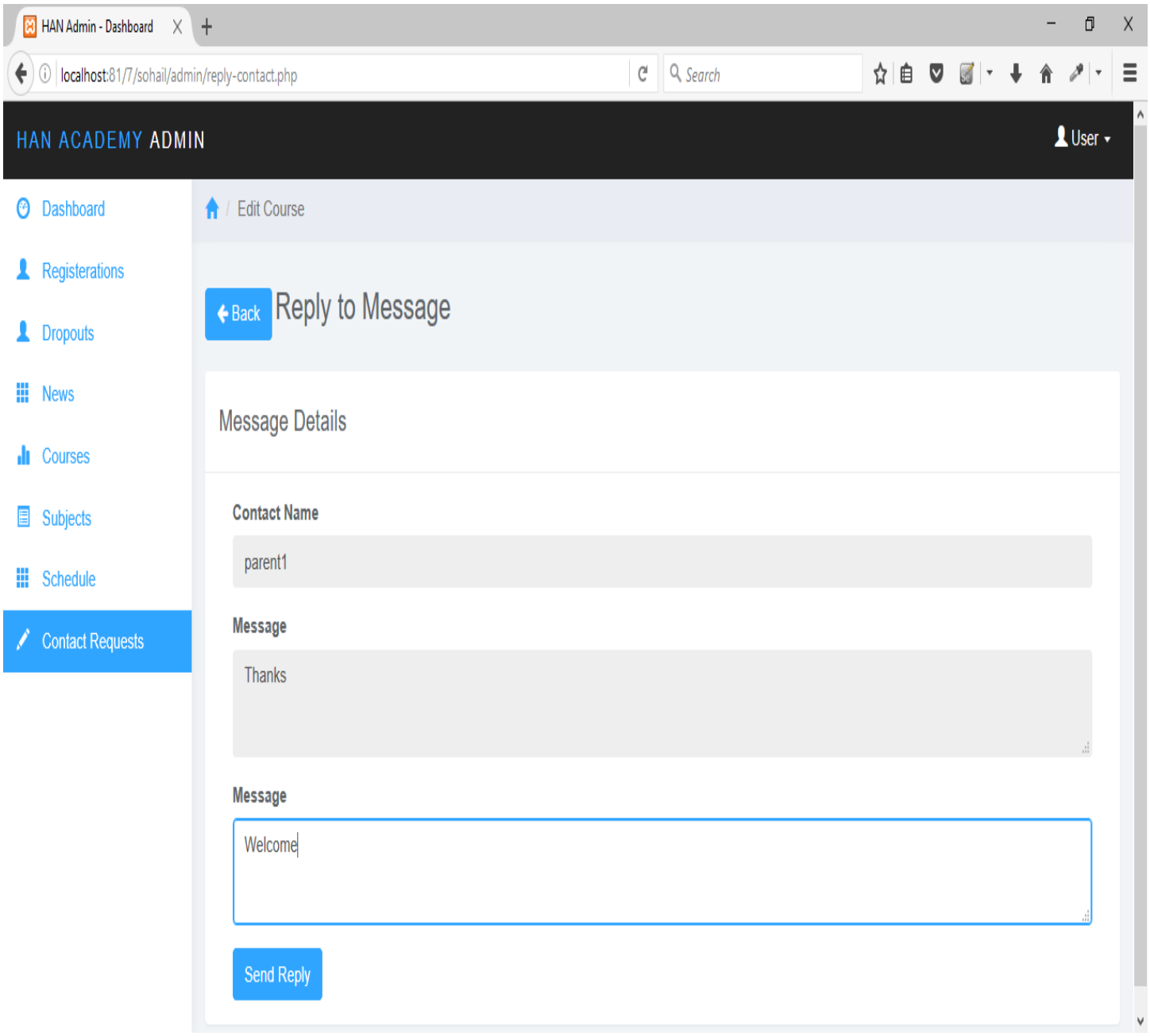
Registered Students – Go to My account from top menu it will display the registered child list and if parent wants to drop the course, he can drop it by clicking red trash icon.



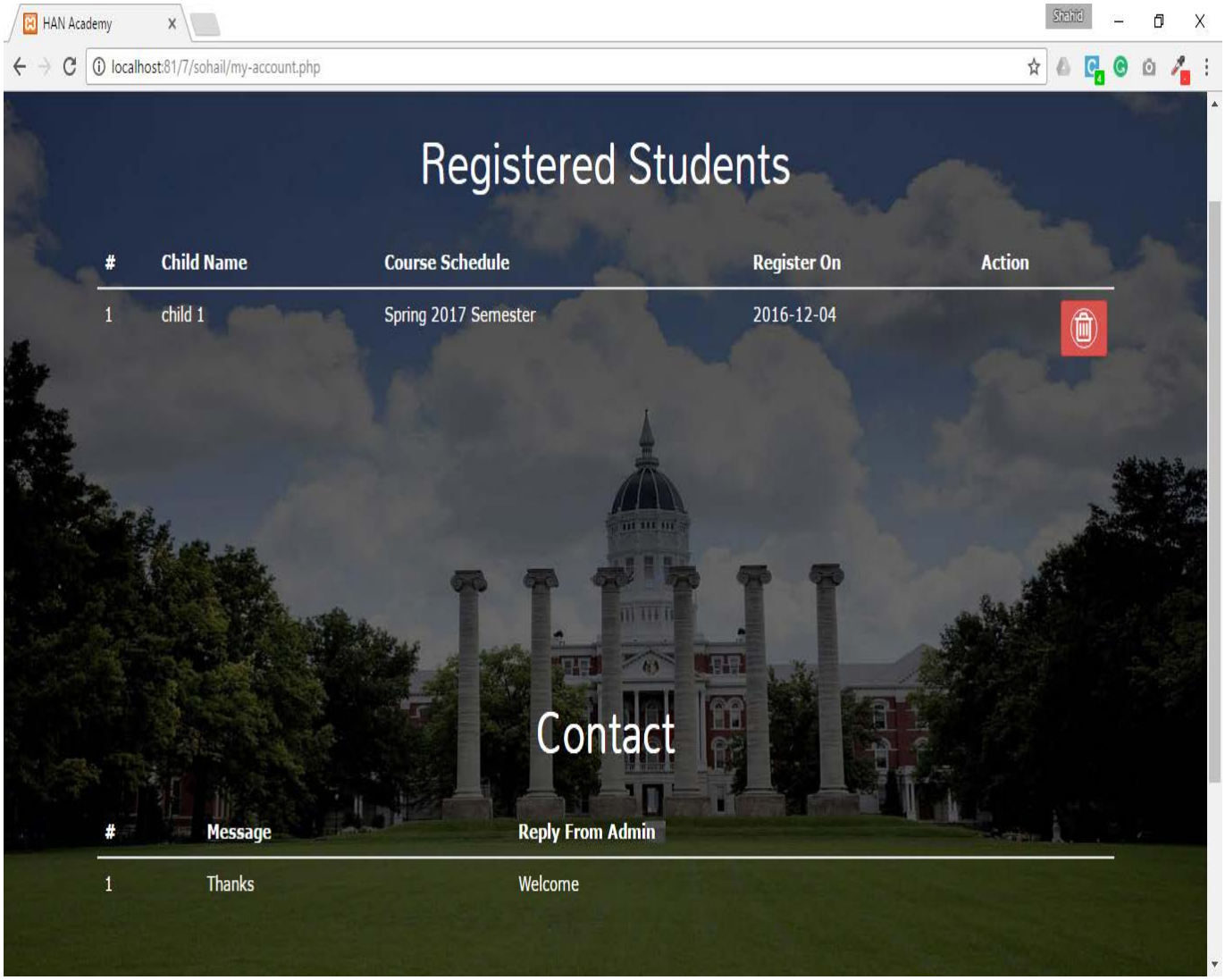
Contact Us – Parent can contact system admin by this form. Parent need to fill up this form and submit.



Contact Request Reply – Once Parent send the contact request, admin will reply for the same from their admin panel.

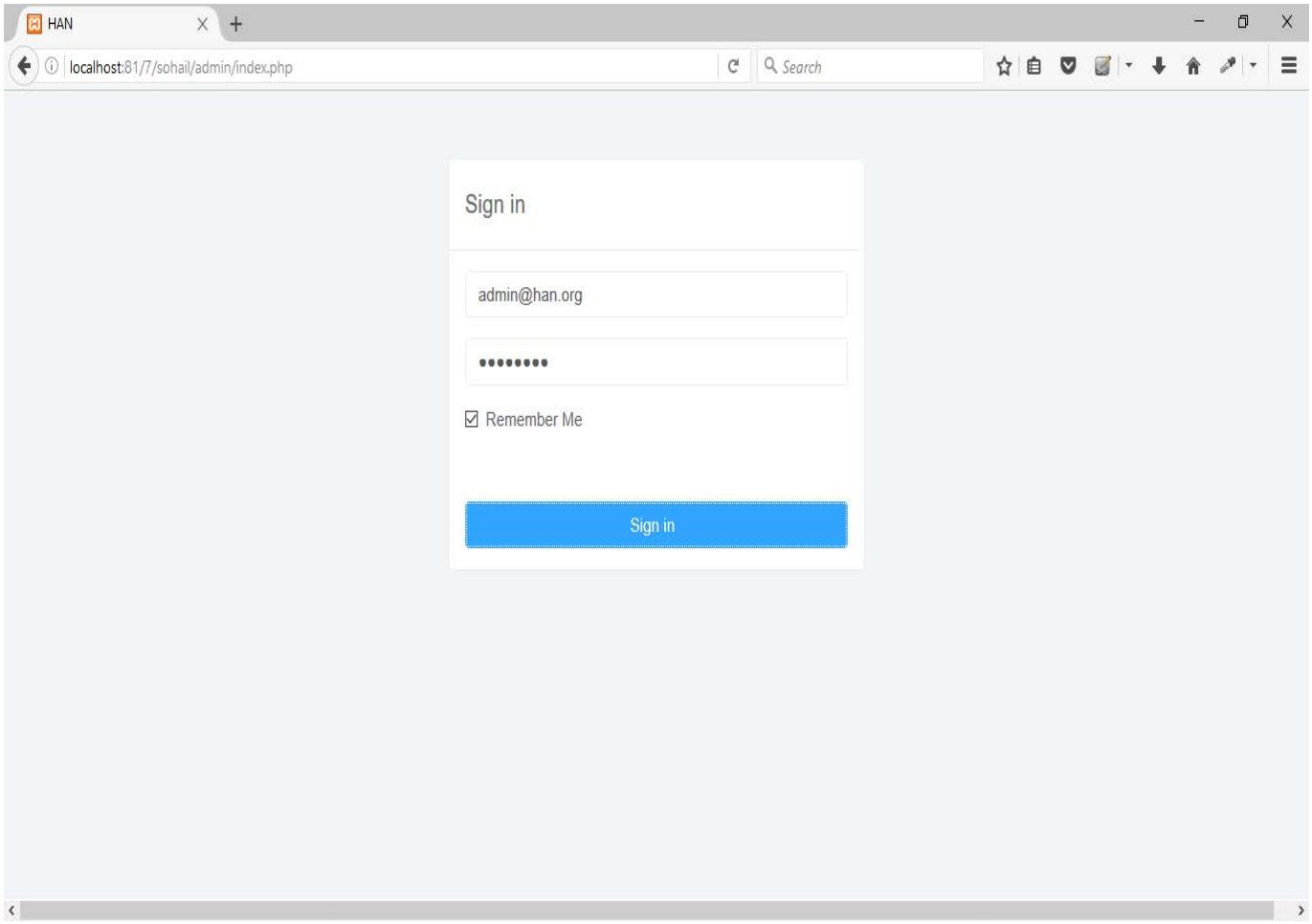


Admin Reply to Parents – Admin reply to parents will display on my account menu below Registered student's list.

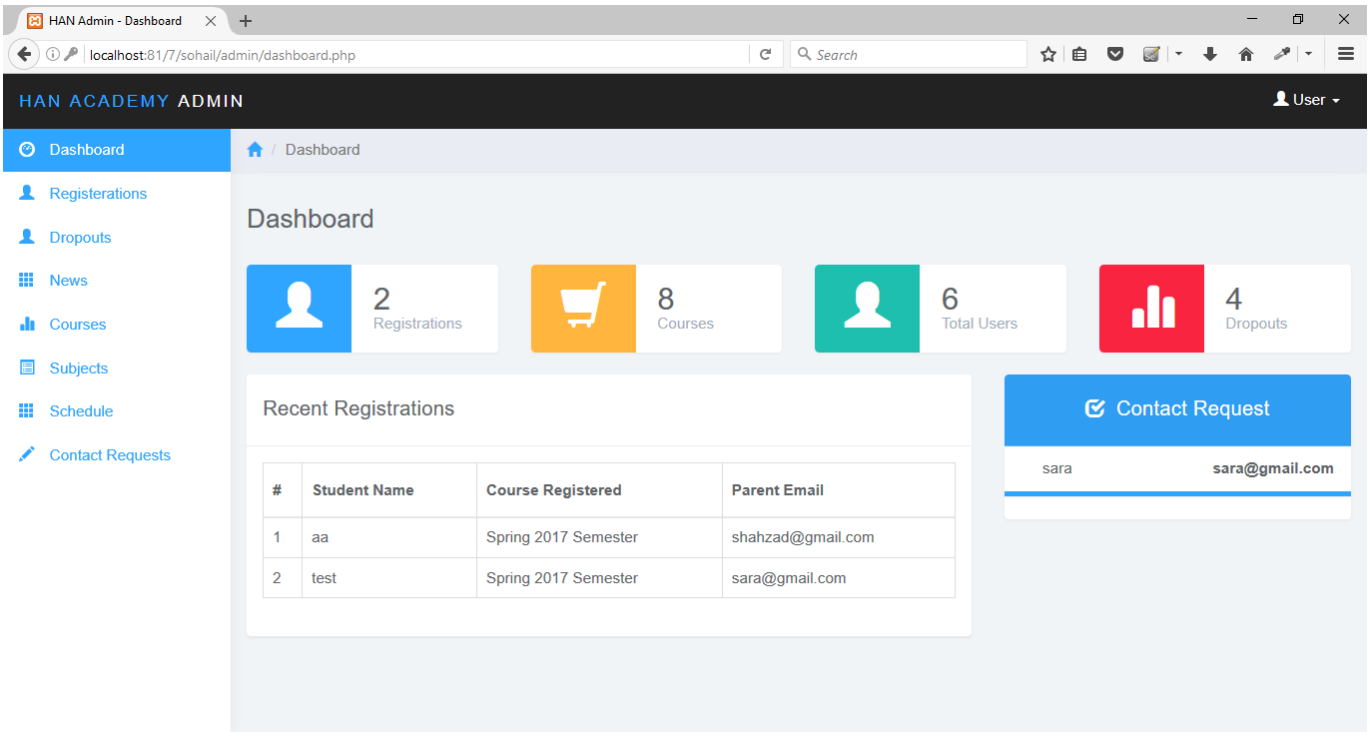


Admin Panel

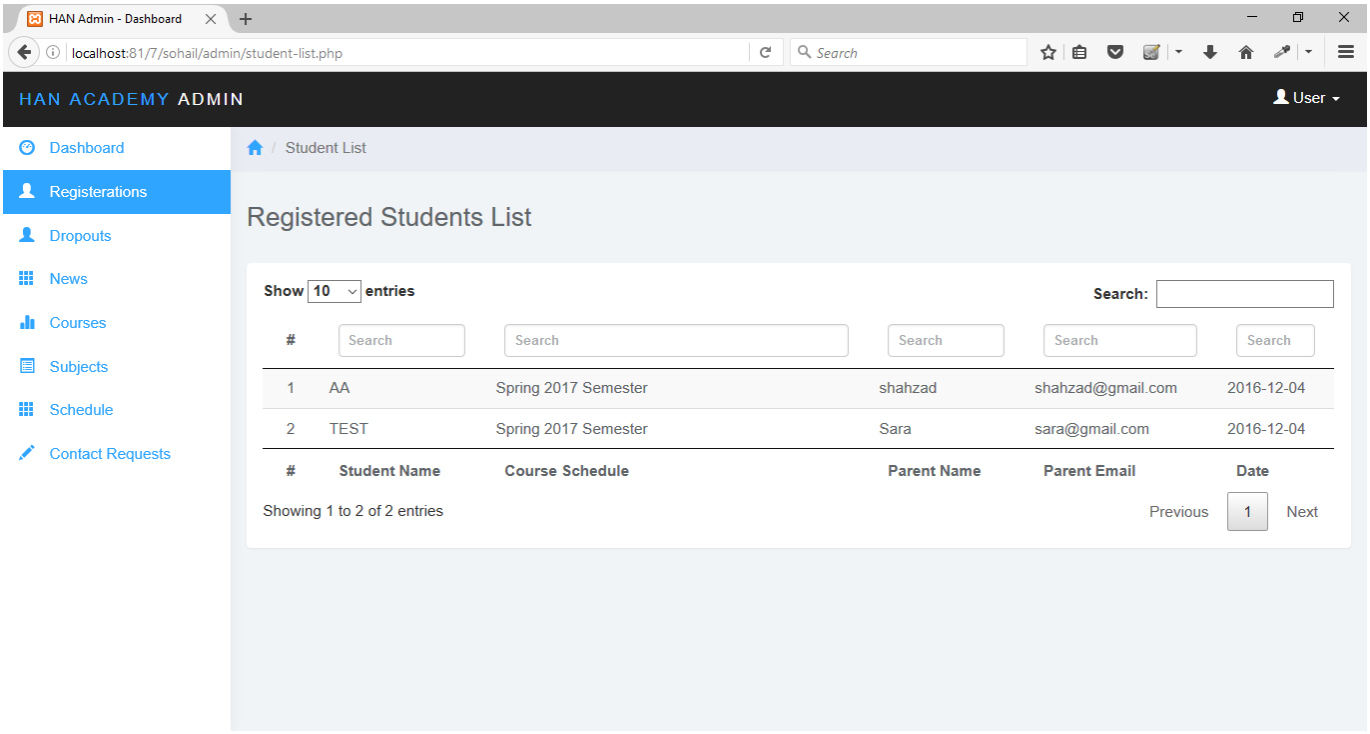
Login for admin to access the backend system. Log in deals with



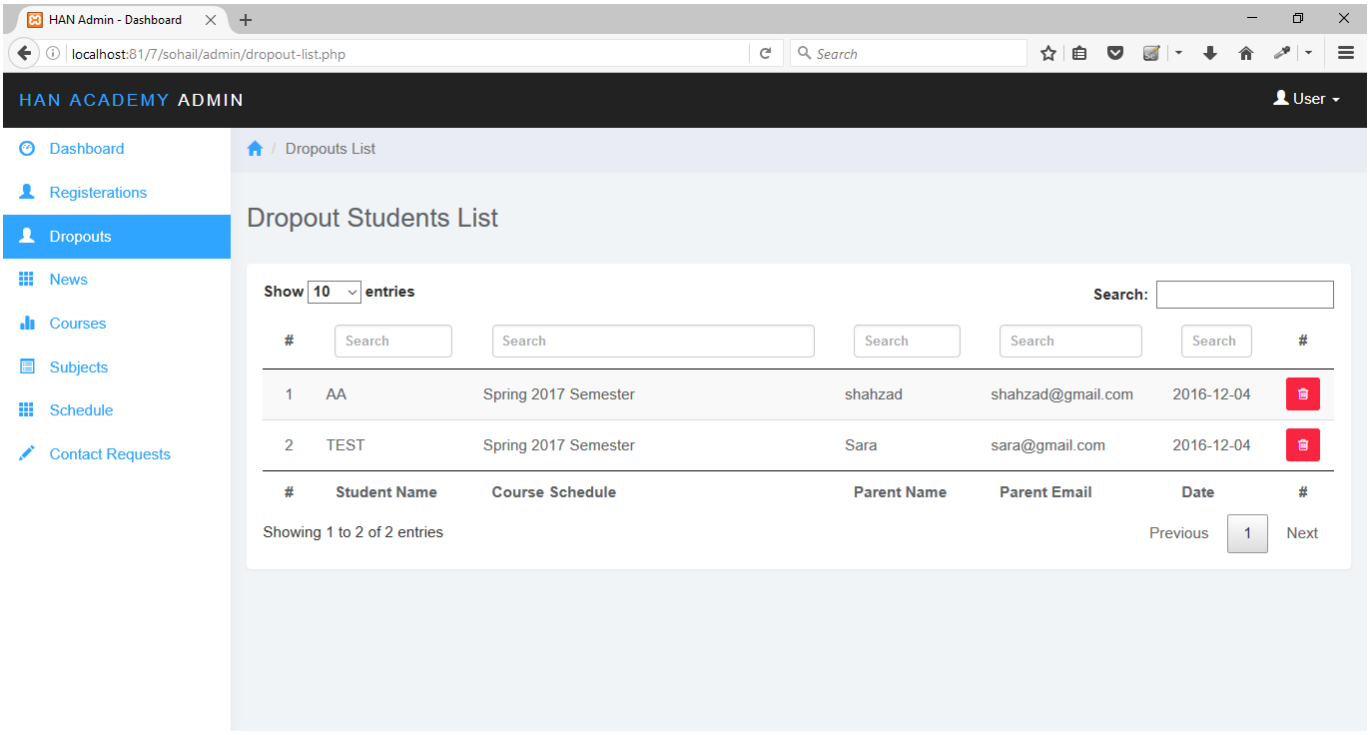
Dashboard – After successful admin will get his dashboard where he can view some stats and navigation menus at left side.



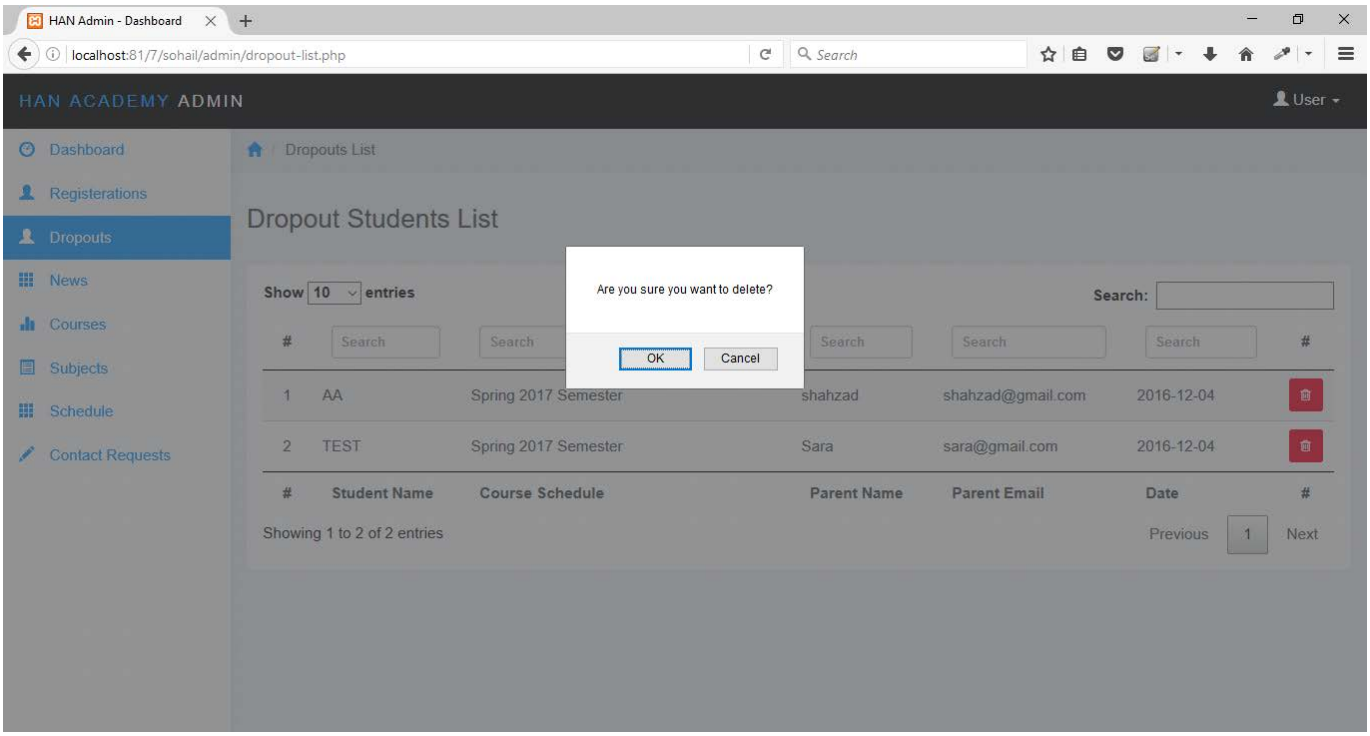
Registered Student List – The entire registered student will get listed here.



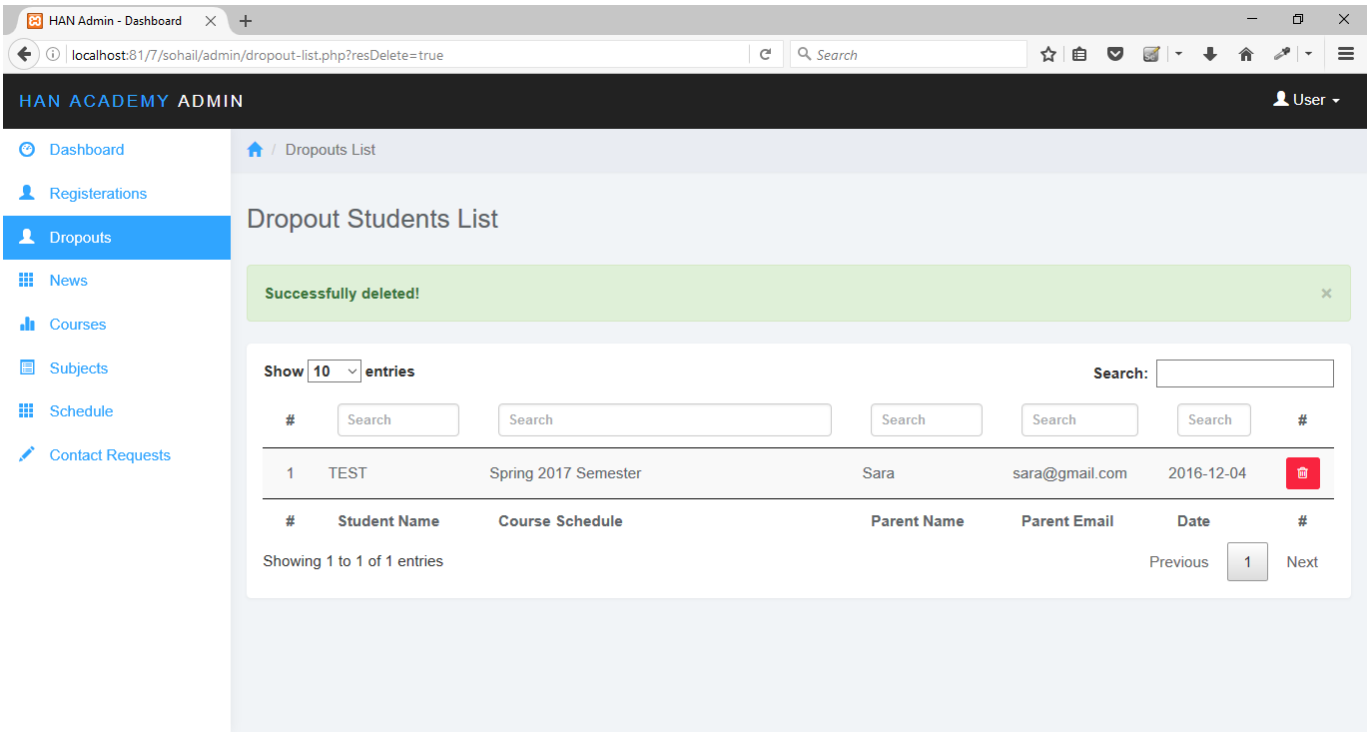
Drop out List – All the drop out students will get listed here.



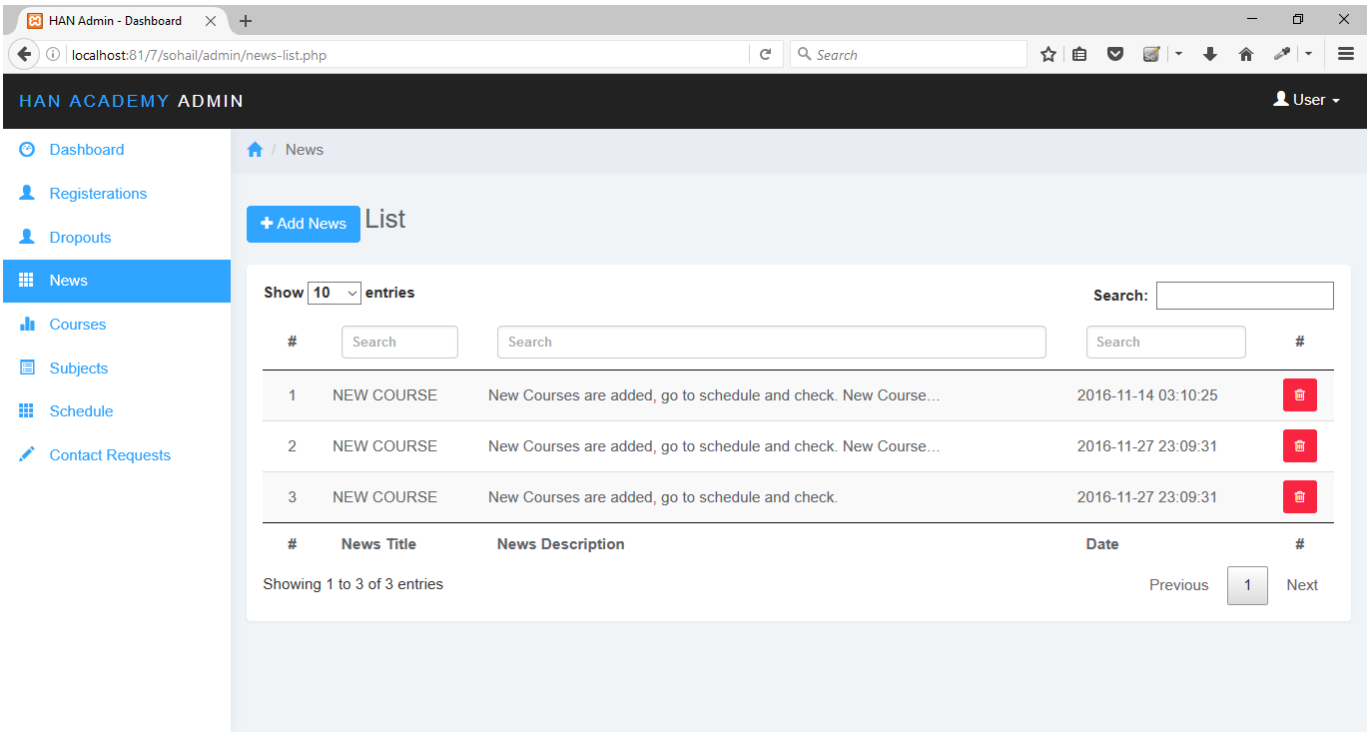
Delete Dropout students – Admin can delete drop out student by clicking on red trash icon. The system will confirm the delete student record.



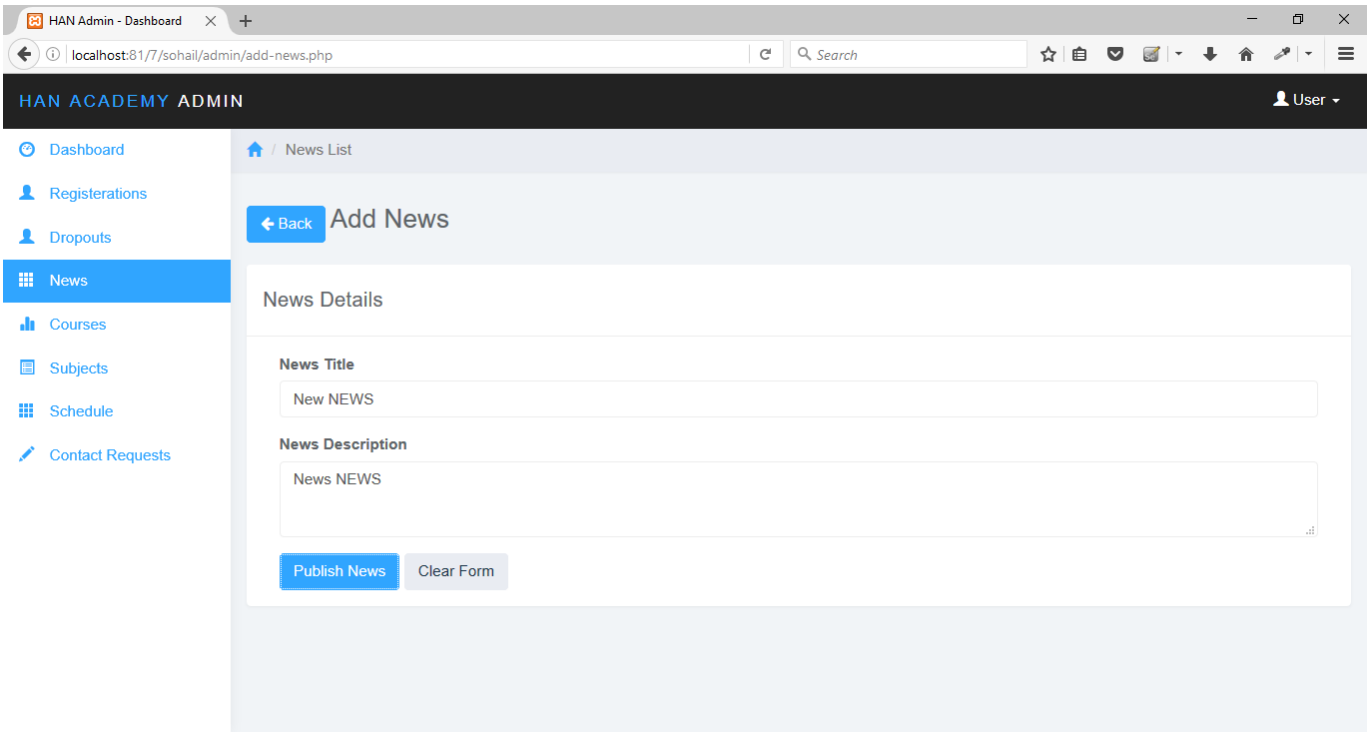
Delete Acknowledgement – After deleting student record system will display the acknowledgement.



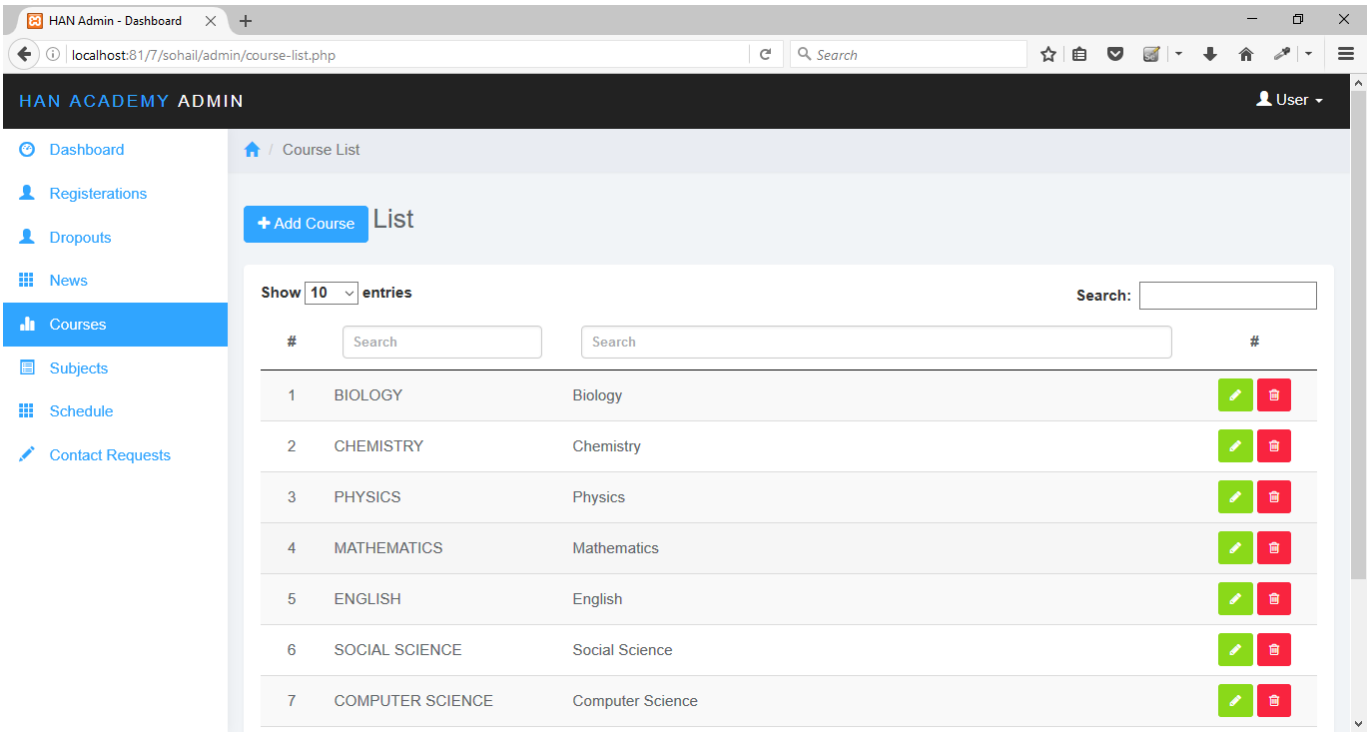
News list – News, which are displaying on parent home page are coming from here, admin can update news.



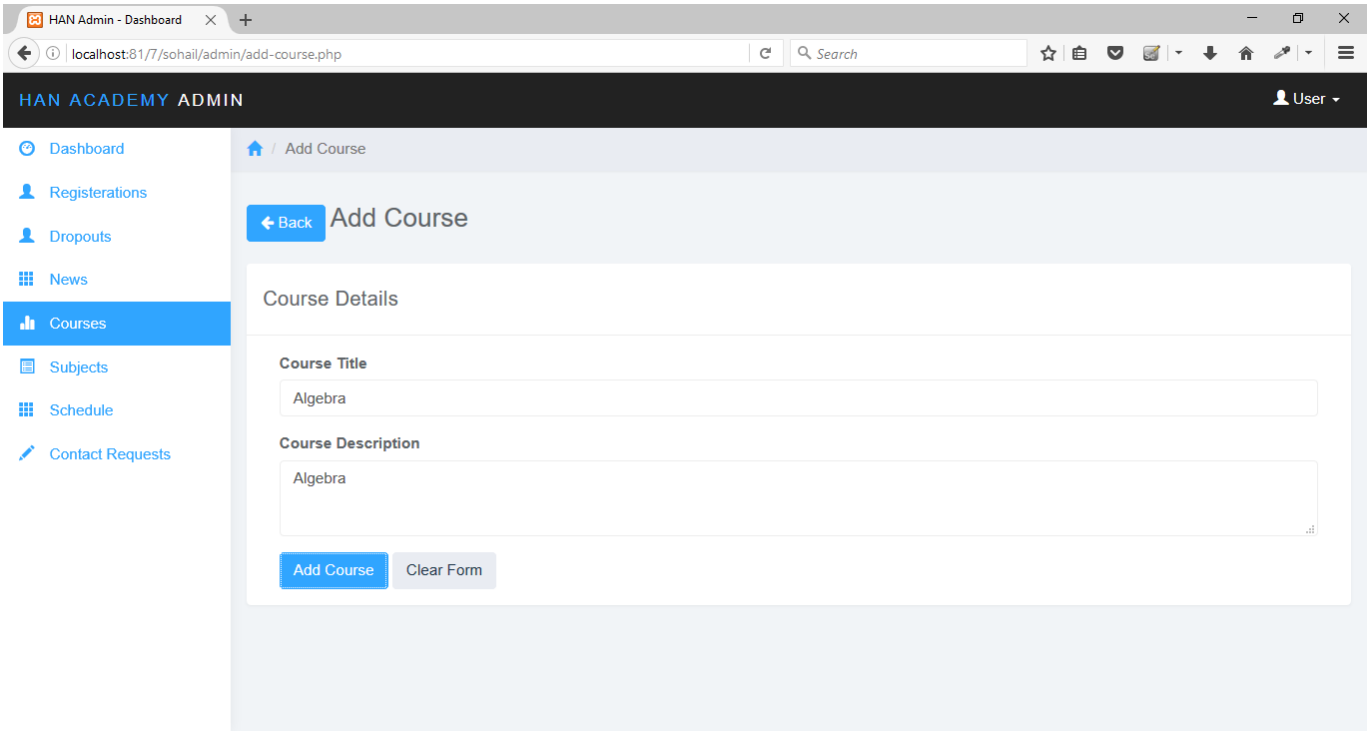
Add News – Enter news title and detail description of news and click on Publish News button to update News on website.



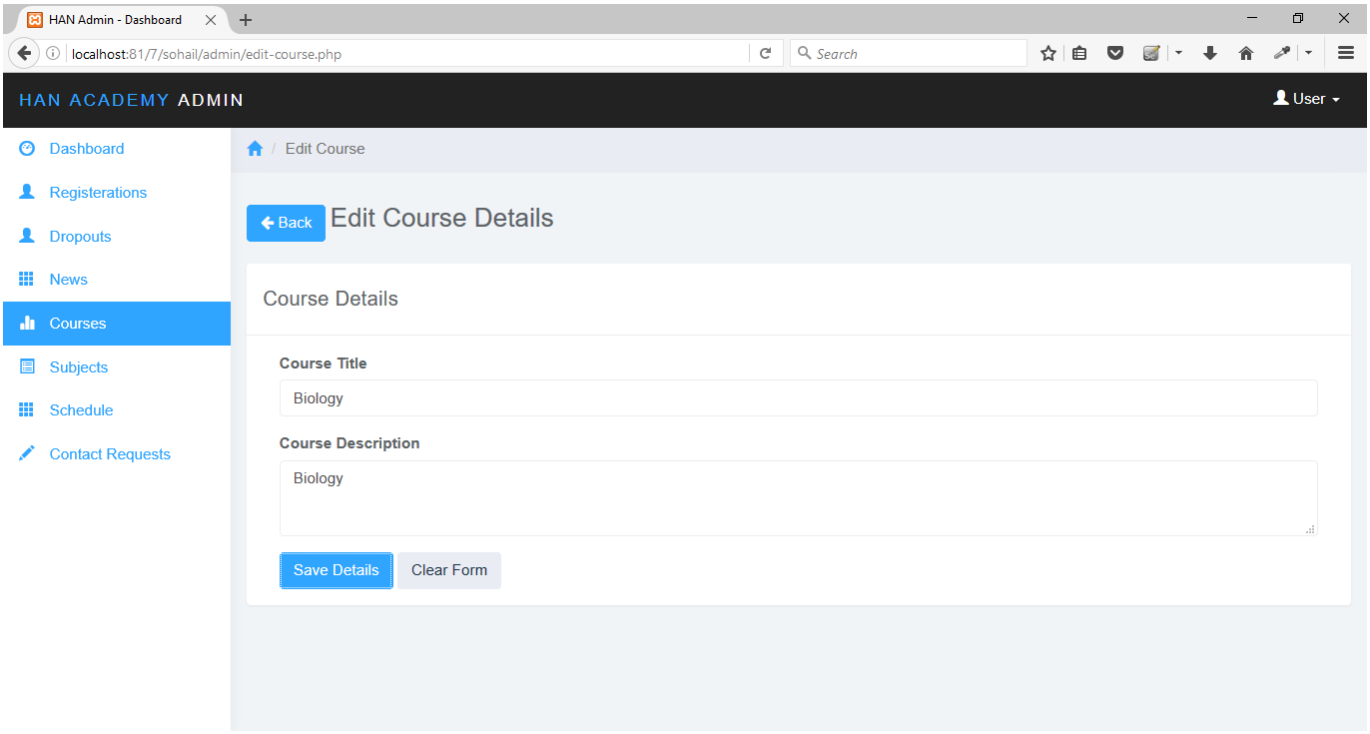
Course List – List of courses and managing courses.



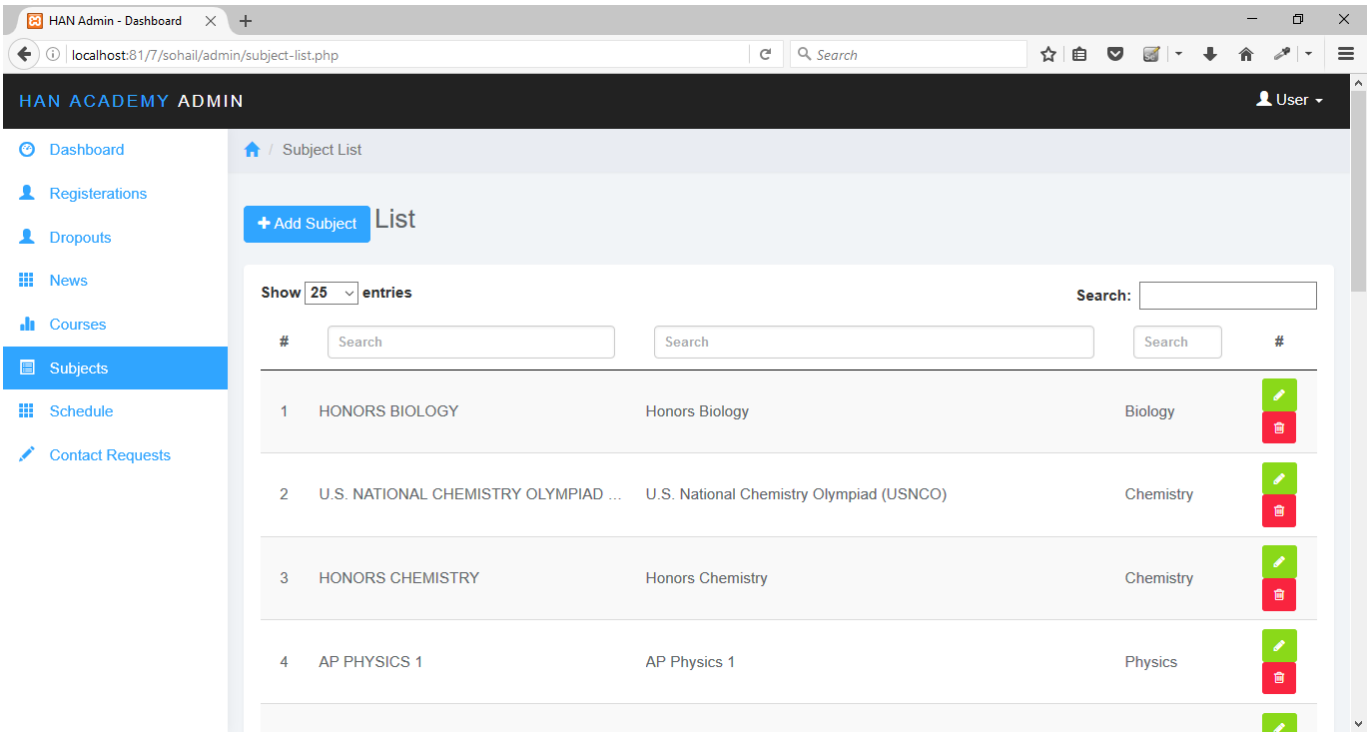
Add New Course – Enter course Title and description and click on Add Course button.



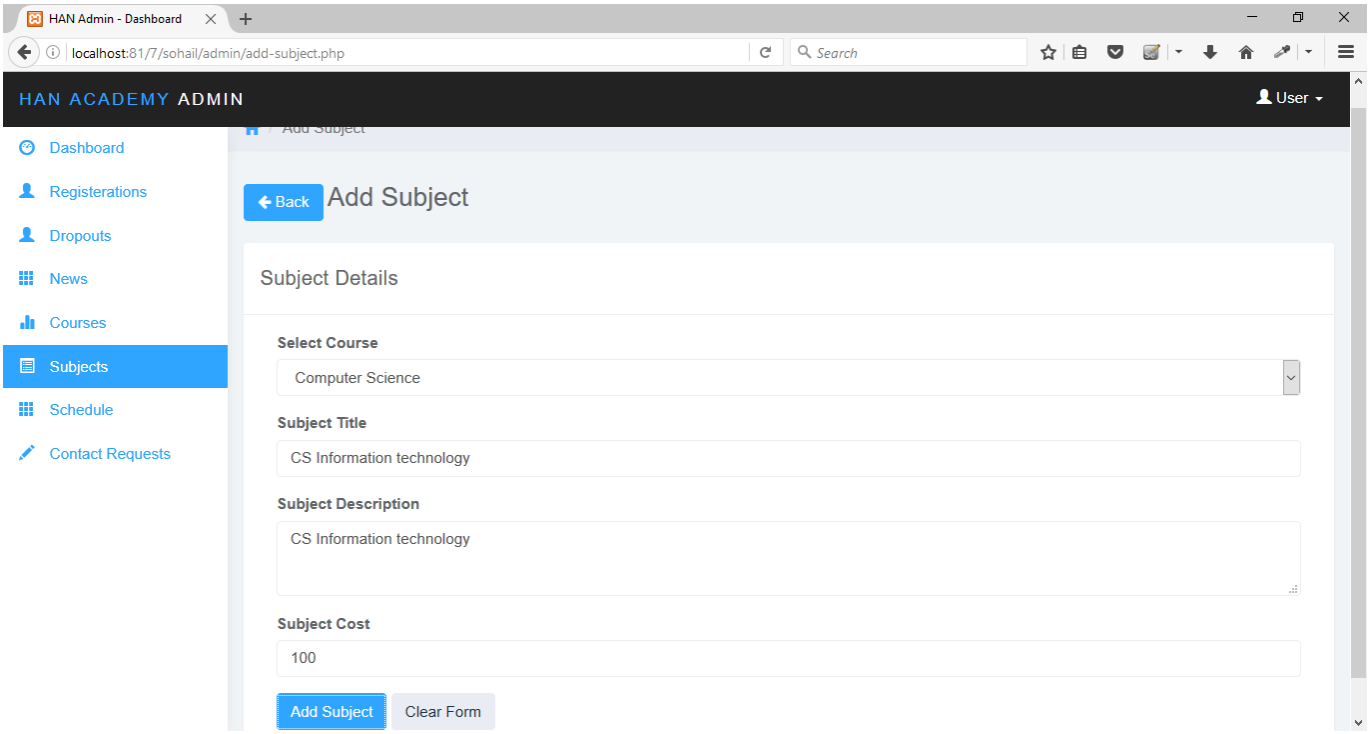
Edit Course – from course list admin can update the course by clicking on blue pencil icon.



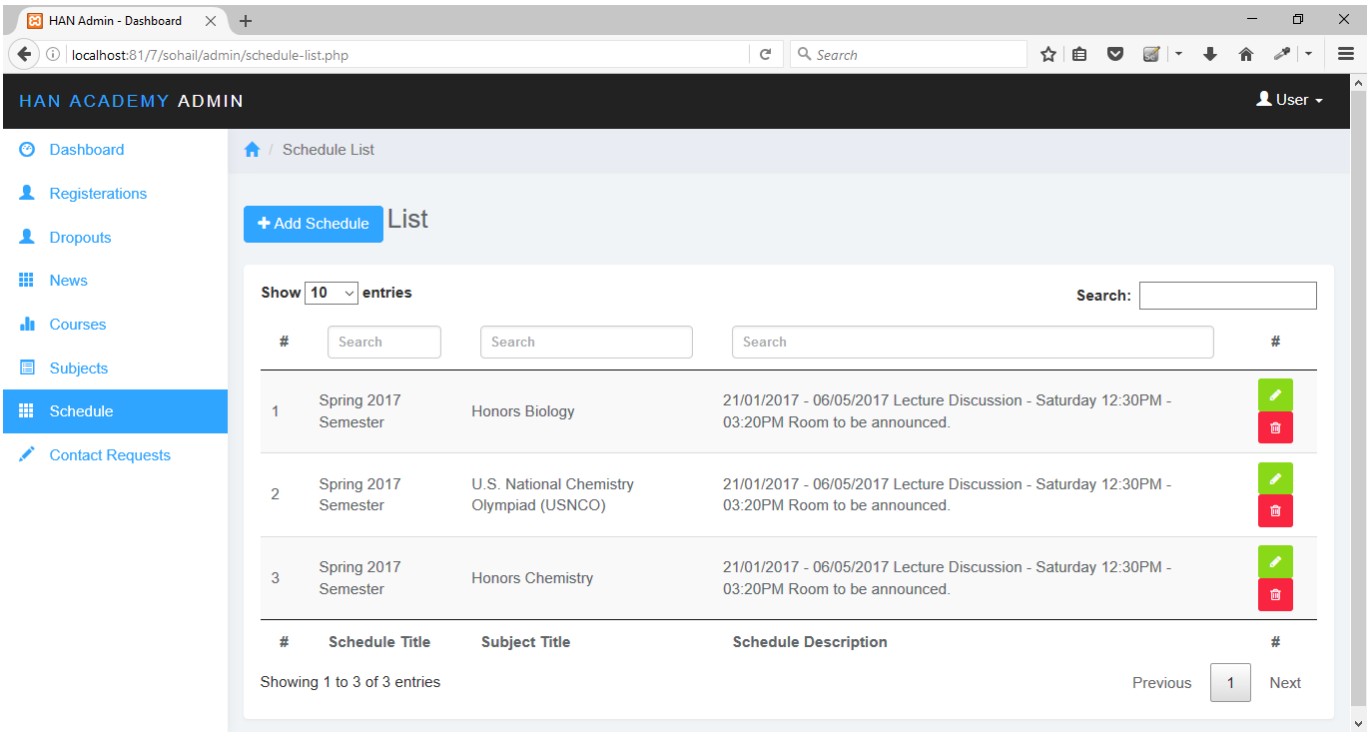
Subject List – All the subjects are listed her and admin can manage the subjects.



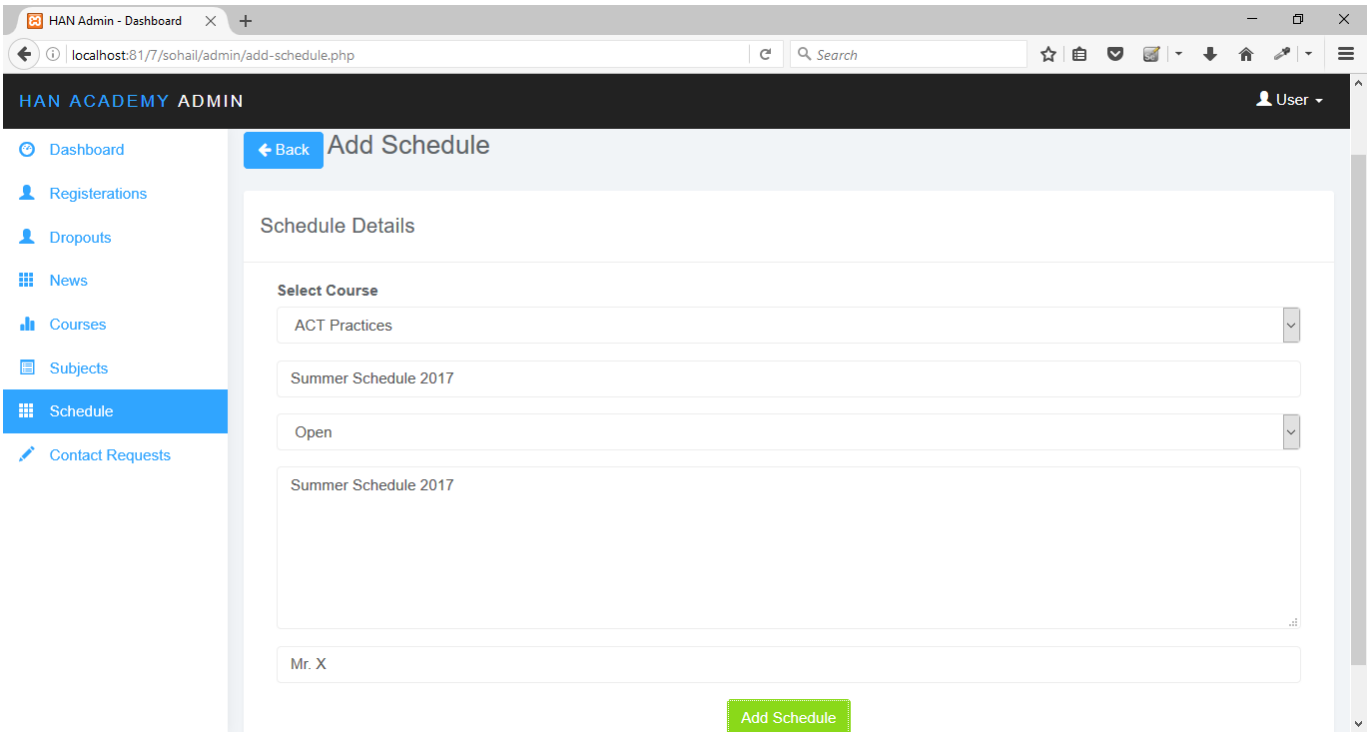
Add New Subject – Select course under which subject has been added and after that enter subject title, description and cost of a subject.



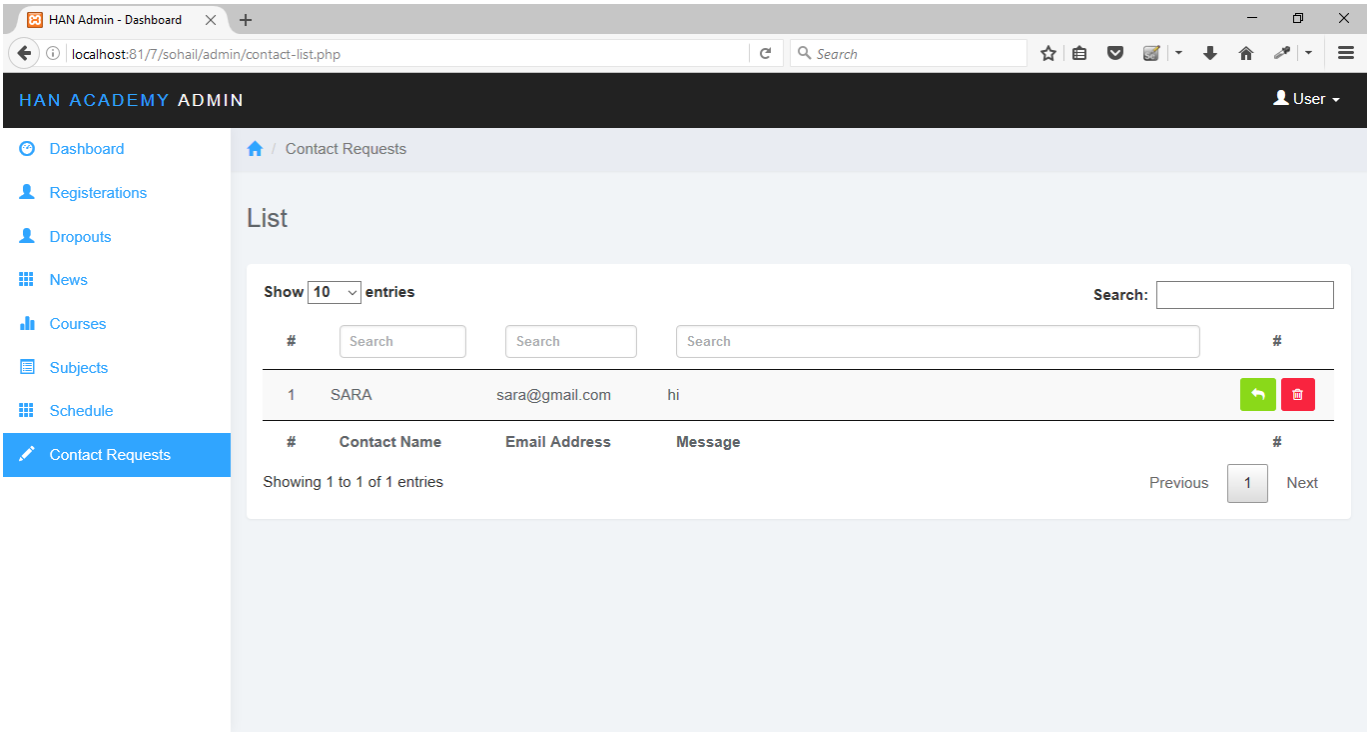
Schedule List – Here schedule list is mentioned.



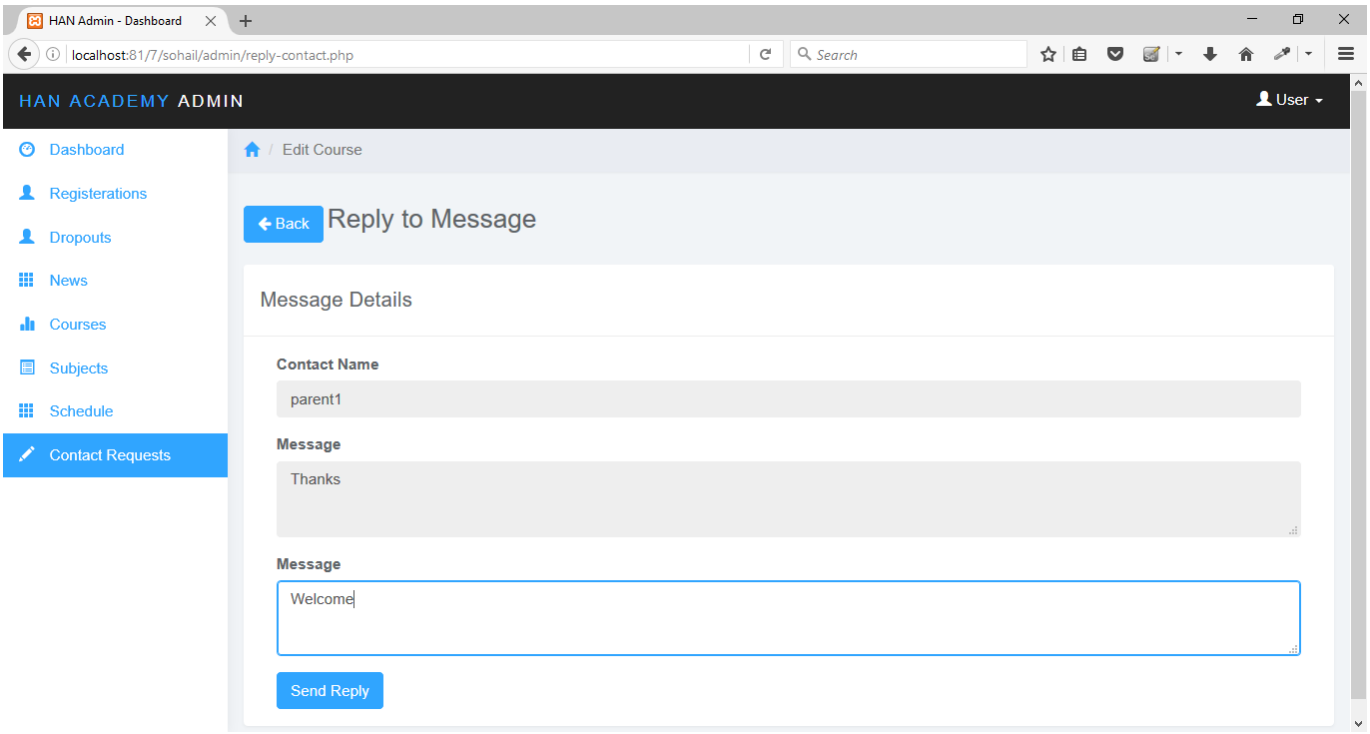
Add New Schedule – Adding new schedule requires course name, schedule title, schedule status, schedule description like date, time, rooms etc. also mention professor for the schedule and click on add schedule button.



Contact request – Once any parent send the details through contact us form those request and messages will display here. Admin can reply to those messages.



Reply to parent contact – Admin need to reply the parents query.



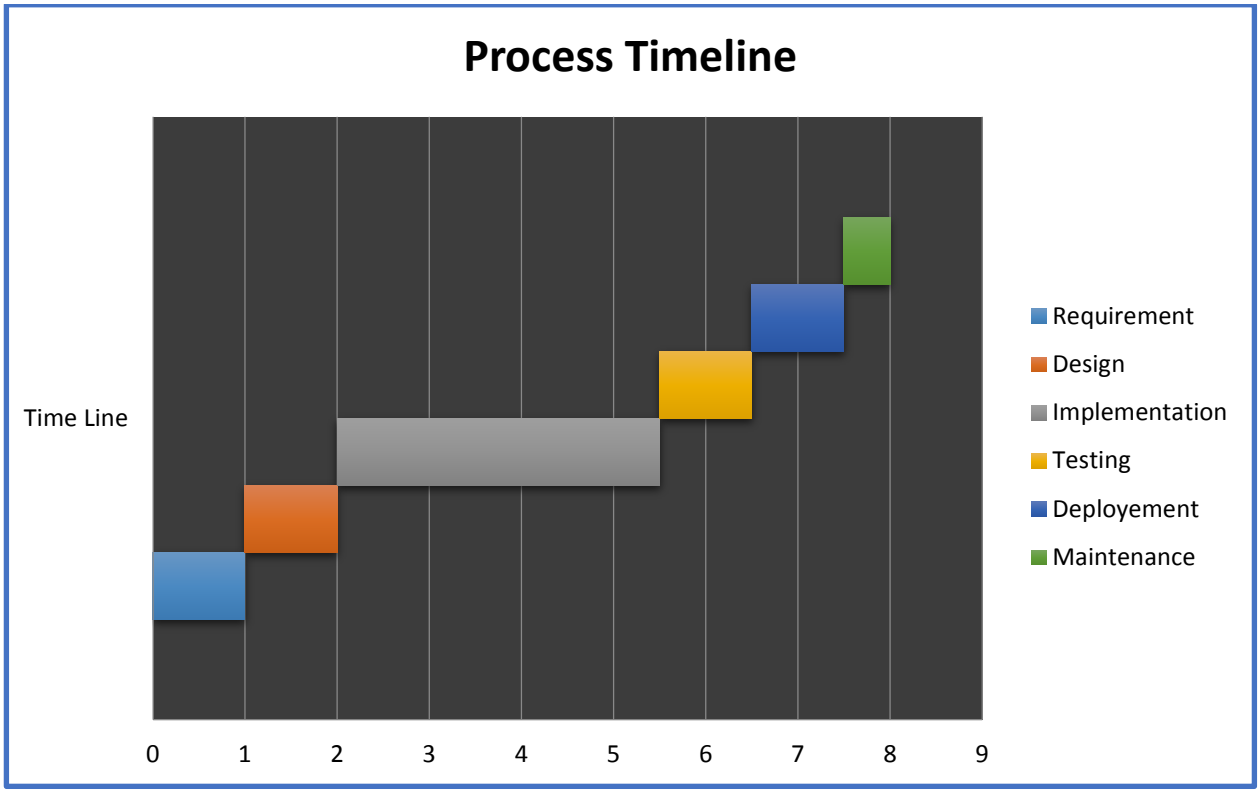
3.2 Operations, Administration, Maintenance and Provisioning (OAM&P)

All the operations on website are performed by admin on regular interval to keep the website up to date. This will help to generate a good business and success of future business.

3.3 Security and Fraud Prevention

The system is using password encryption technique where passwords are in encrypted format so it prevents hacking of accounts.

3.4 Release and Transition Plan



4 Project Design Description

System Design

Designing is the first step in the development phase for any product or system. The designer's goal is to produce a model and representation of an entity that will later be built. Once system requirements

have been specified and analyzed, system design is first of the three technical activities i.e. design, code and test that is required to build.

UML Diagrams

It is a standard language for software blue prints. A modeling language is language whose vocabulary & rules focus on conceptual and physical representation of the system. The UML is a language for specifying, visualizing, constructing and documentation. The main diagrams are use case, sequence, activity, collaboration diagram.

Class Diagrams

Class diagram is UML structure diagram which explains structure of designed system at the level of classes & interfaces, shows their features, constraints & relationship, dependencies, associations, generalizations, etc.

A class is shown as a solid outline rectangle containing class name, optionally with compartment separated by horizontal lines containing features and other members of classifier.

Features of classes are attributes & operations. When class is shown with three compartments, middle compartment holds list of attributes & bottom compartment holds list of operations.

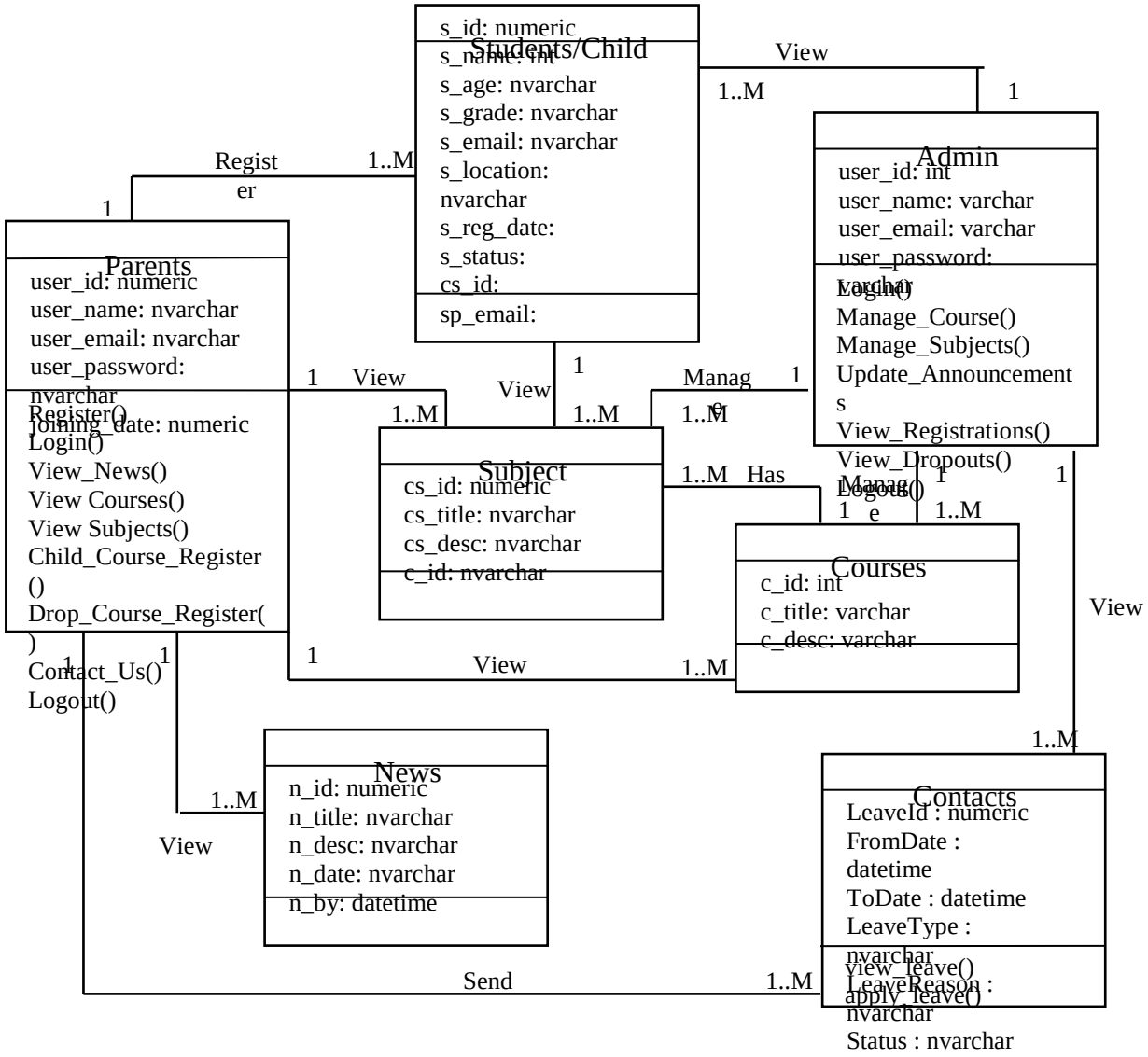


Figure 17 - Class Diagram

Above diagram represents the system classes and their attributes. Every class has its methods and properties. Class diagrams represent the relationship between classes.

Use Case Diagram

Use case diagrams describe the interaction of any parson or external device with system which is under design process. Use cases are often developed in collaboration between software developers with other users of the proposed system. The main purpose of the use case diagram is to help developing teams to visualize the functional requirements of system. Use case diagram shows relationship between actors and use cases. The use case describes the specific interaction of an actor with the system under design.

A use case diagram contains four modules:

- The boundary, which defines, system of interest in relation to world around it.
- The actors, usually individuals involved with system defined according to their roles.
- The use cases are the specific roles played by actors within and around system.
- The relationships between & among actors and the use cases.

Association: Each use case represents a unit of useful functionality that provide to actors. An association between actor & a use case indicates that the actor and use case somehow interact or communicate with each other.

Extend: It is a directed relationship that specifies how and when behavior defined in usually supplementary (optional) extending use case can be inserted into behavior defined in the extended use case.

Include: Use case include is a directed connection between two use cases, which is used to show that behavior of included use case (the addition) is inserted into behavior of the including (the base) use case.

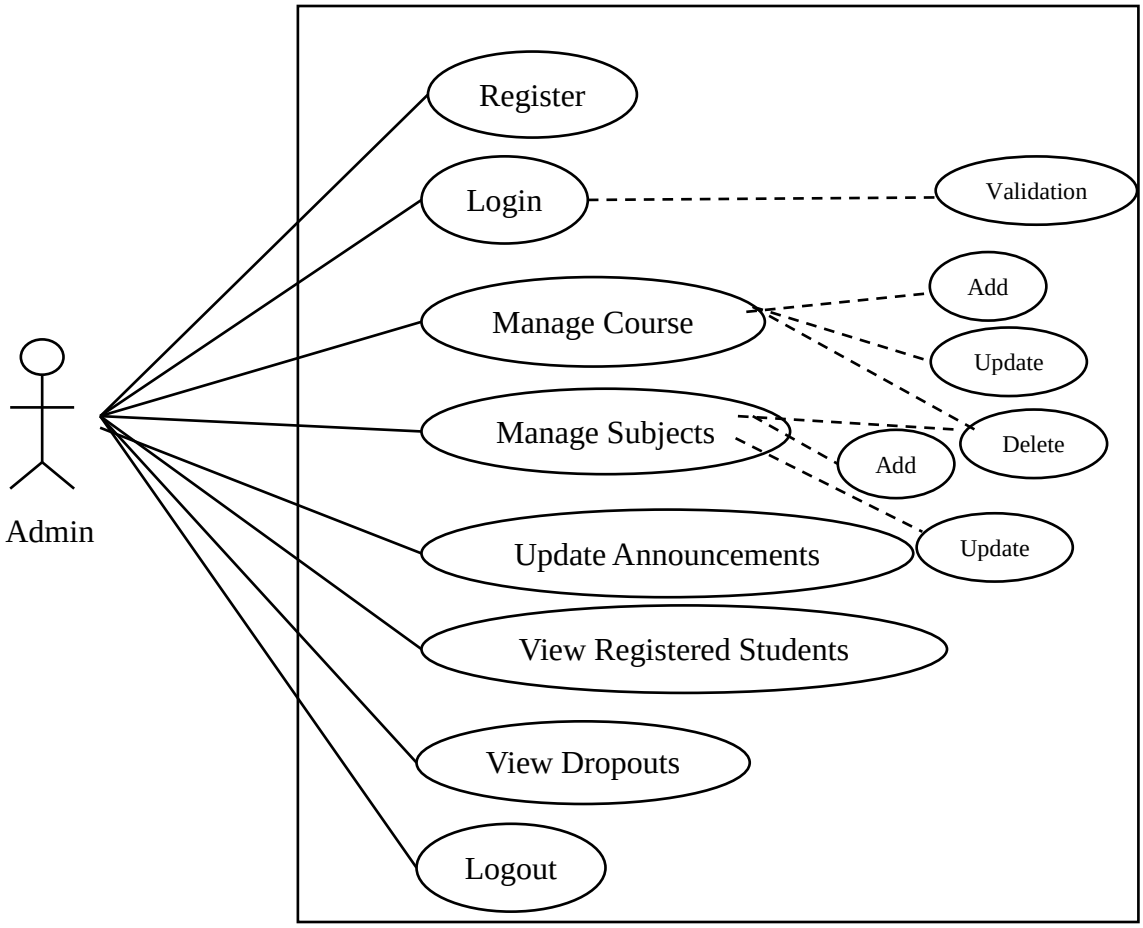


Figure 18 - Use Case for Admin

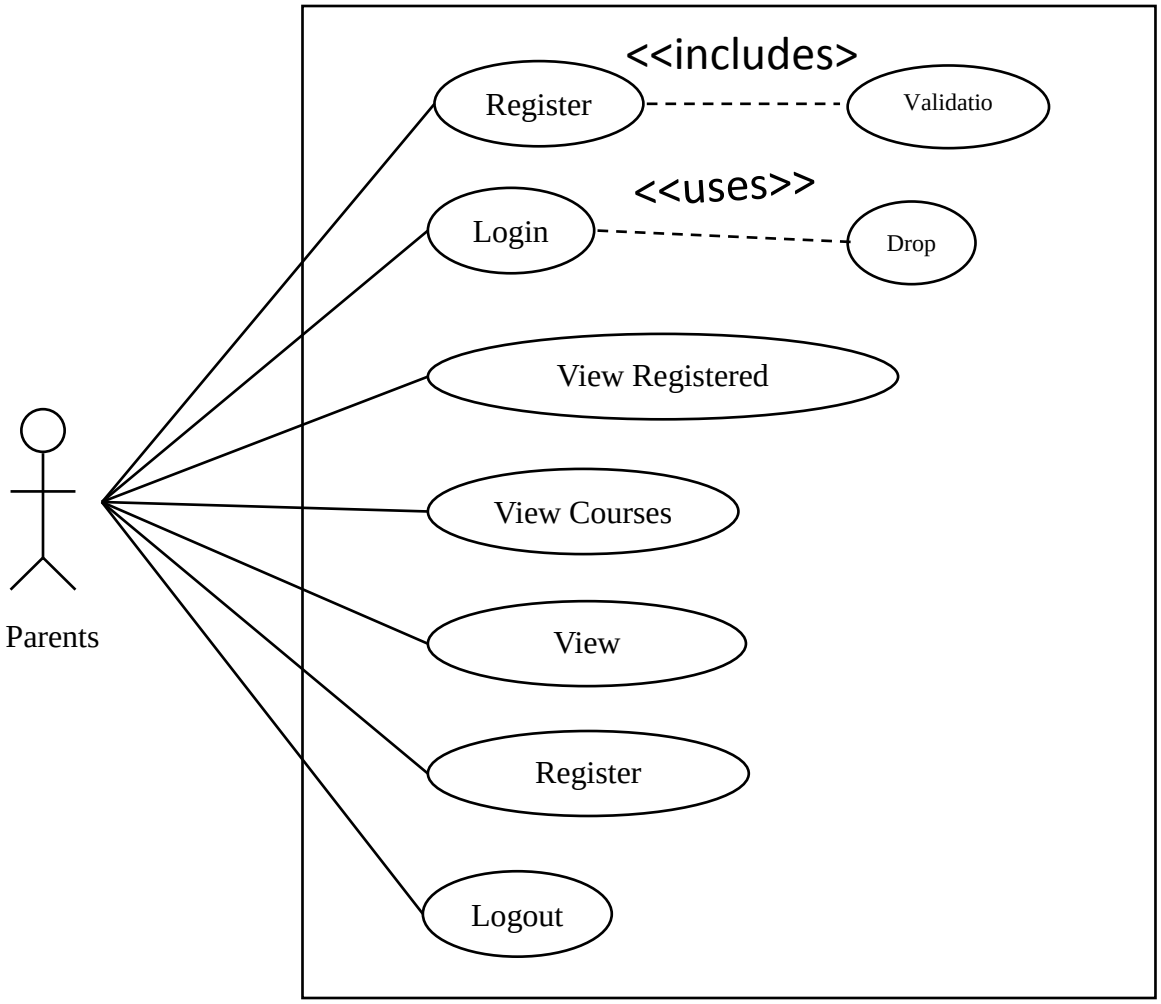


Figure 19 - Use Case for Parents

Sequence Diagram

A Sequence diagrams depicts sequence of actions that occur in the system. The invocation of methods in each objects, and the order in which invocation occurs is captured in a sequence diagram. This makes Sequence diagram is a very useful tool to easily represent dynamic behavior of a system.

Definition of Sequence diagram:-

A Sequence diagram is made up of objects & messages. Objects are represented exactly how they have been represent in all UML diagrams – as rectangles with the underlines class name within the rectangle.

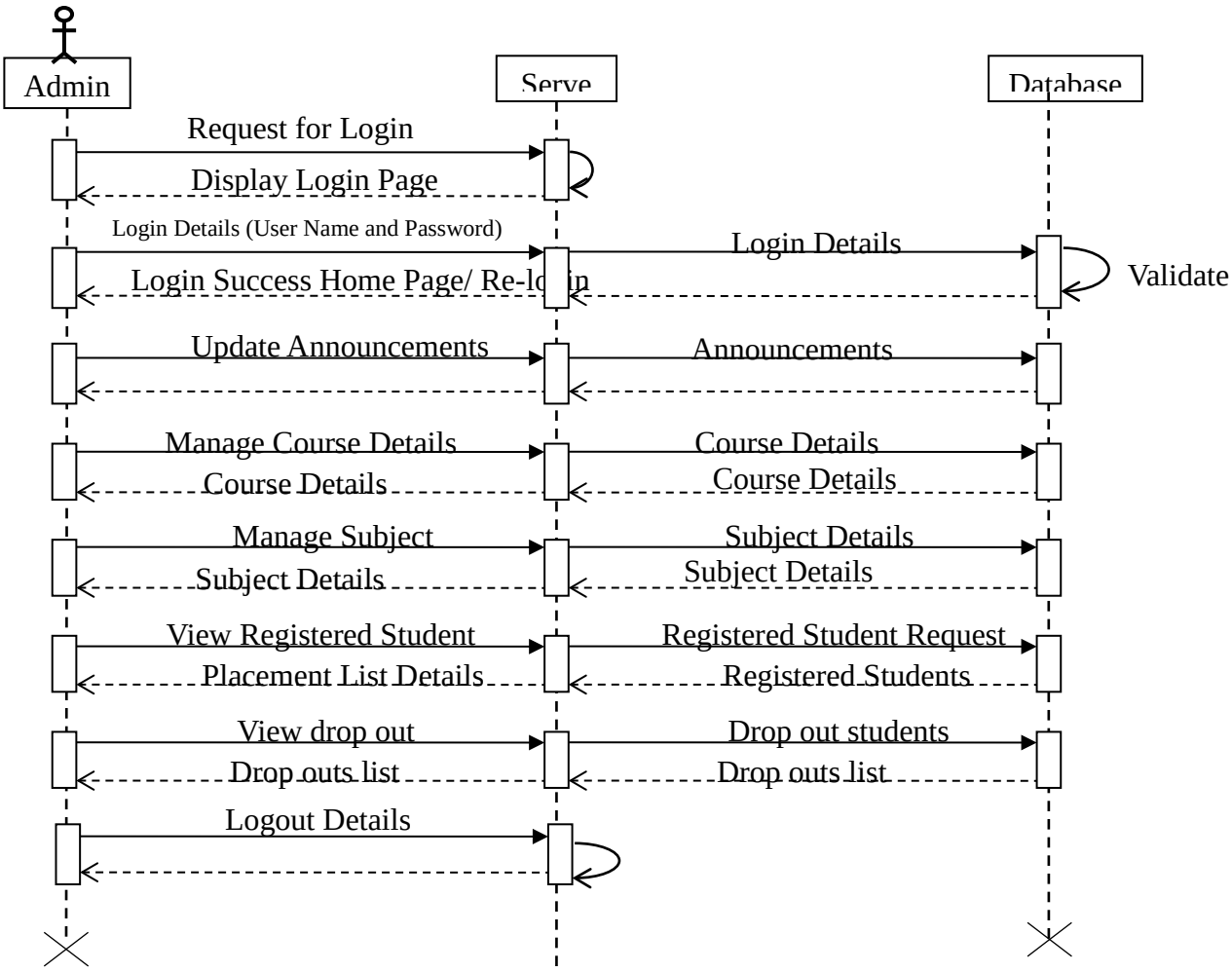


Figure 20- Sequence Diagram Admin

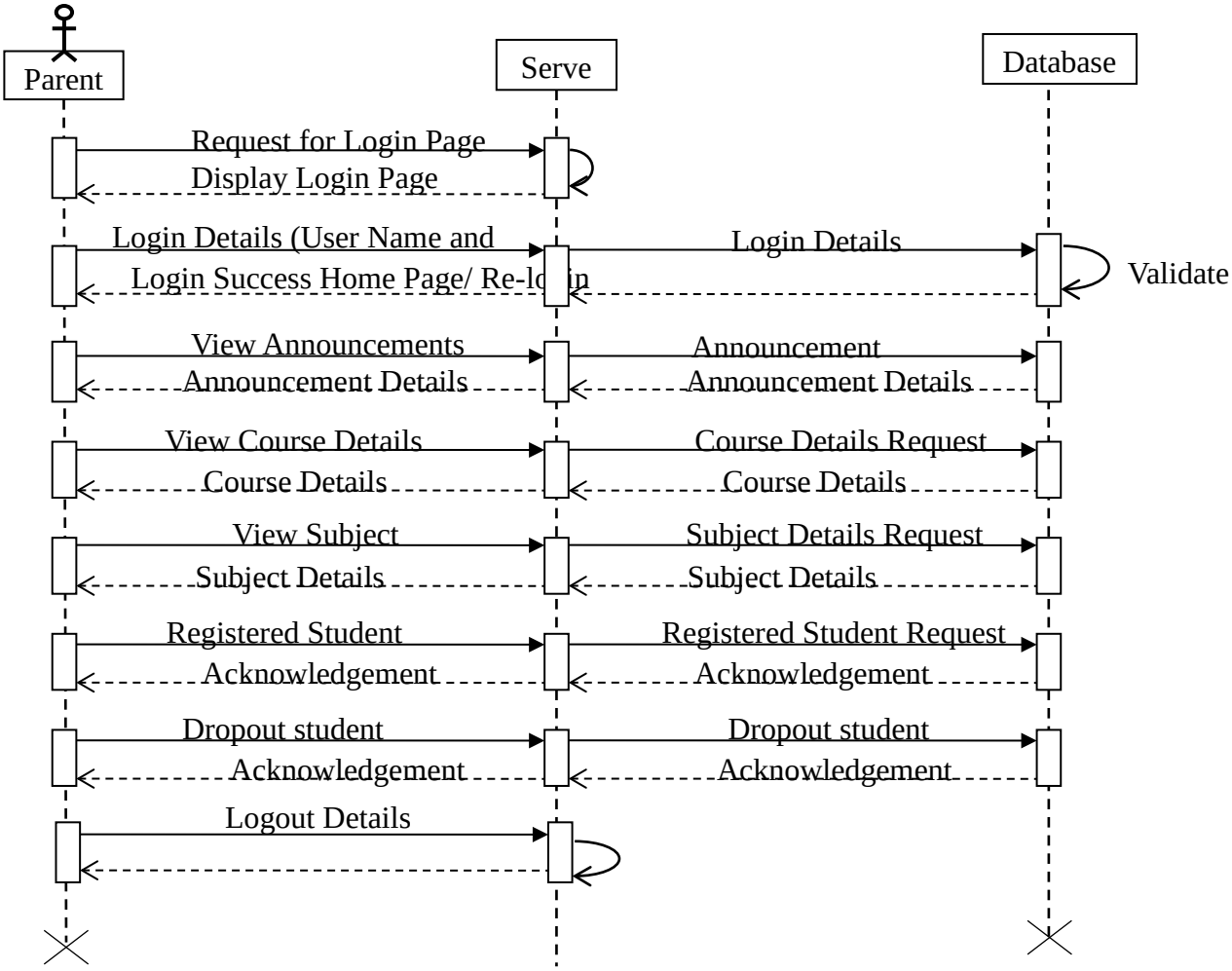


Figure 21- Sequence Diagram Parent

Activity Diagram

The Activity diagram is a simple way to represent workflows & their steps of an entire system or a subsystem. The easiest way to visualize activity diagram is to think of a flowchart of code. The flowchart is used to depict the business logic flow and events that cause decisions and actions in the code to take place. Activity diagram represent the business & operational workflows of system. An Activity diagram is a dynamic diagram that shows activity and the event that causes object to be in the particular state. So, what is the important of an Activity diagram, as opposed to state diagram? A state diagram shows the different states of an object are during the lifecycle of its existence in the system, and transitions in the state of the objects. These transition depict the causing these transitions, shows by arrows.

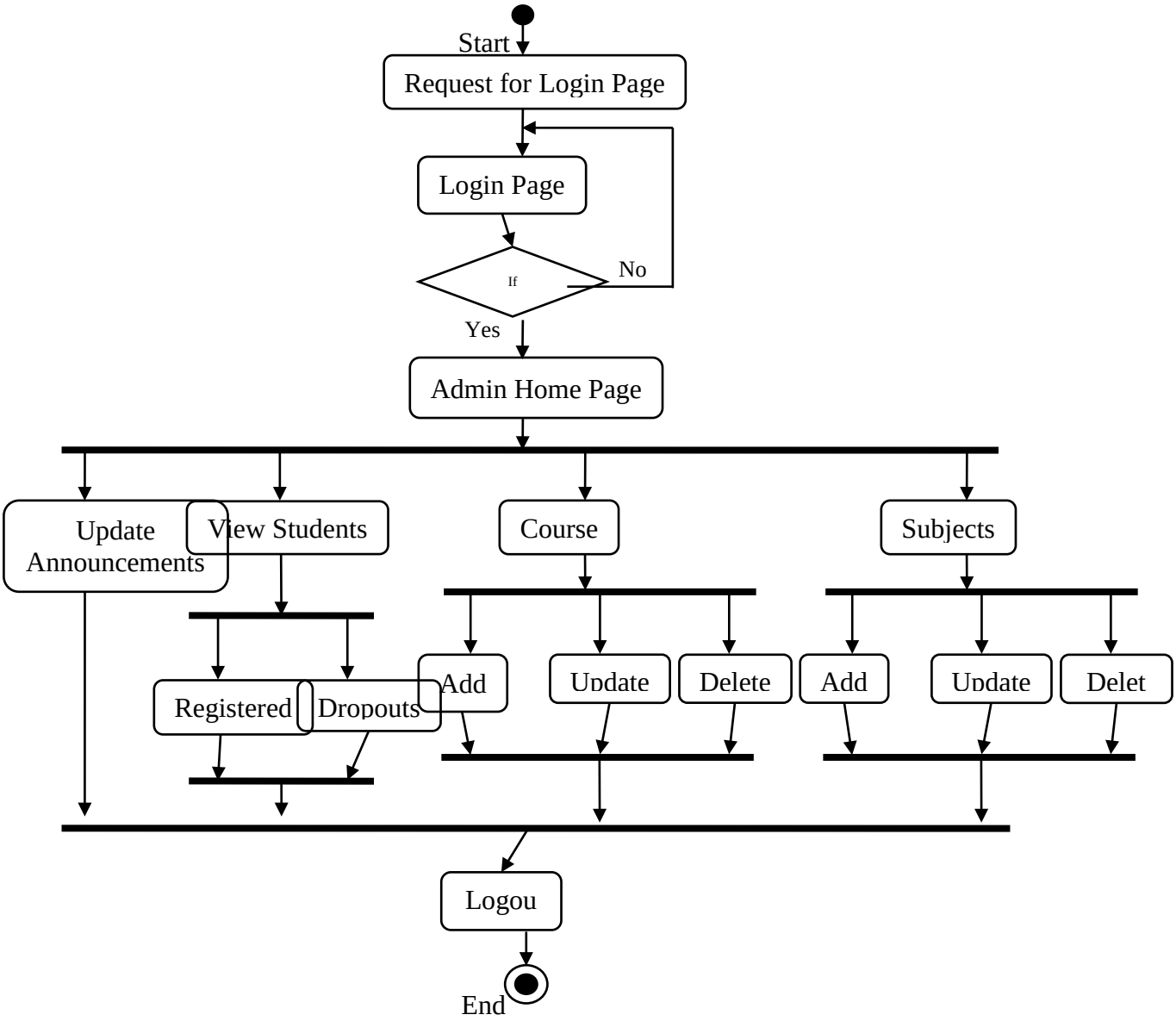


Figure 22 - Activity Diagram Admin

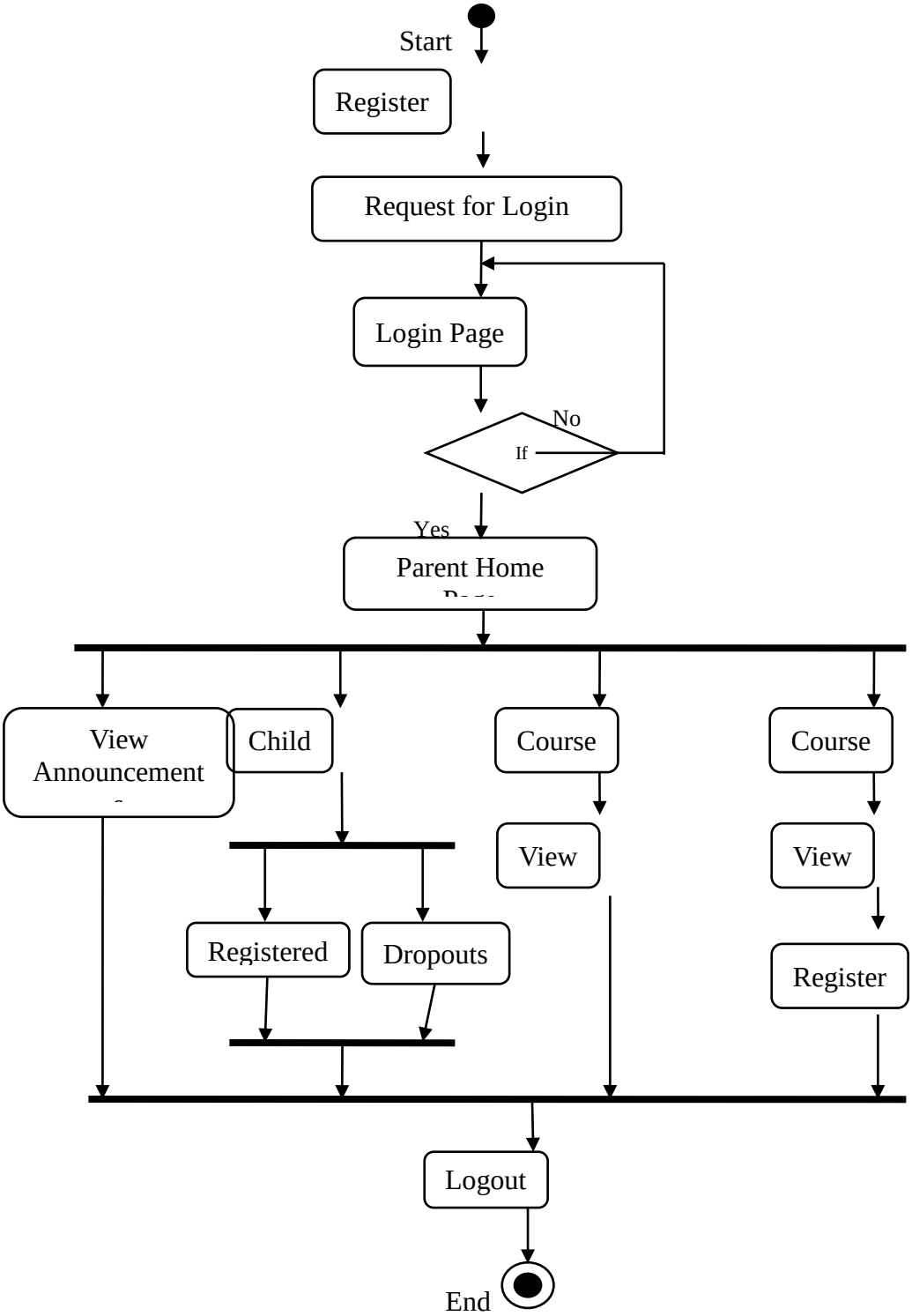


Figure 23 - Activity Diagram Parent

5 *Internal/external Interface Impacts and Specification*

We have used some online libraries for good looking of our website. We have user bootstrap CDN for CSS, Font Awesome Icons for icons and JQUERY for some client side scripting and w3 CSS for some visual effects.

6 Design Units Impacts

6.1 Functional Area A/Design Unit A

Course Table

Sr. No	Field Name	Data Type (Size)	Constraints	Description
1	c_id	int	Primary Key	Course ID
2	c_title	varchar	Not Null	Course Title
3	c_desc	varchar	Null	Course Description

Subject Table

Sr. No	Field Name	Data Type (Size)	Constraints	Description
1	cs_id	int	Primary Key	Subject ID
2	cs_title	varchar	Not Null	Subject Title
3	cs_desc	varchar	Null	Subject Description
4	c_id	int	Foreign Key	Course ID

News Table

Sr. No	Field Name	Data Type (Size)	Constraints	Description
1	n_id	int	Primary Key	New ID
2	n_title	varchar	Not Null	News Title
3	n_desc	varchar	Not Null	News Description
4	n_by	varchar	Foreign Key	News Uploaded By

Parent Table

Sr. No	Field Name	Data Type (Size)	Constraints	Description
1	user_id	int	Primary Key	Parent ID
2	user_name	varchar	Not Null	Parent Name
3	user_email	varchar	Not Null	Parent Email Address
4	user_password	varchar	Foreign Key	Parent Password

Child Table

Sr. No	Field Name	Data Type (Size)	Constraints	Description
1	child_id	int	Primary Key	Student ID
2	child_name	varchar	Not Null	Student Name
3	child_age	varchar	Not Null	Student Age
4	child_grade	varchar	Not Null	Student Grade
5	child_email	varchar	Not Null	Student Email
6	sp_email	varchar	Foreign Key	Parent Email

Cart Table

Sr. No	Field Name	Data Type (Size)	Constraints	Description
1	cart_id	int	Primary Key	Cart ID
2	chid_id	int	Foreign Key	Child ID
3	sc_id	int	Foreign Key	Schedule ID
4	sp_email	varchar	Foreign Key	Parent Email
6	cart_status	varchar	Not Null	Cart Status
7	cart_date	date	Not Null	Cart Date
8	cart_drop	varchat	Not Null	Cart Drop

6.1.1 Functional Overview

Running Moodle system in any system required a XAMPP server which we have already installed using above steps. Moodle uses PHP and PHP runs on a server as it is a server side scripting language.

6.1.2 Impacts

XAMPP has a complete solution for Moodle system. XAMPP comes up with Apache server and MYSQL database required for Moodle system.

6.1.3 Requirements

Running the system smoothly admin and parents required some hardware and software configuration are mentioned below.

Admin Hardware Requirements

1GB RAM

80GB Hard Disk

Strong internet Connection

Admin Software Requirement

XAMPP

Any Web Browser (Prefer Google Chrome)

Parent Hardware Requirements

500MB RAM

40GB Hard Disk

Strong internet Connection

Parent Software Requirement

Any Web Browser (Prefer Google Chrome)

6.2 Functional Area B/Design Unit B

6.2.1 Functional Overview

System provides parents to view the entire available schedule from anywhere and parents can register child in course.

System required testing to confirm whether it is ready for use or not?

6.2.2 Impacts

System is running properly from both end i.e. admin and parent site. System is ready for use and deploy on server.

6.2.3 Requirements

Done manual testing on a system to verify it works correctly or not.

7 Open Issues

There is no open issue in a system

8 Acknowledgements

Moodle is a simple and very interesting technology to learn PHP and MYSQL thoroughly.

9 References

Using Moodle in Organizations [iBook] By Stuart R Mealor.

Moodle 3.x Teaching Techniques By Susan Smith Nash

Software Engineering: A Practitioner's Approach, 7/e by Roger S Pressman, R. S. Pressman & Associates, Inc.

https://moodle.org/

https://moodle.org/demo/

https://docs.moodle.org/dev/Main_Page

https://en.wikipedia.org/wiki/Learning_management_system

10 Appendices

Moodle is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalized learning environments. You can download the software onto your own web server or ask one of our knowledgeable Moodle Partners to assist you.

Moodle is built by the Moodle project which is led and coordinated by Moodle HQ, an Australian company of 30 developers which is financially supported by a network of over 60 Moodle Partner service companies worldwide.

Ref - https://docs.moodle.org/31/en/About_Moodle