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# Digitized Engineering Notebook

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## **Abstract**

In this Web Application three levels of users can be seen where each user is segregated or identified based on the level of access provided to the users. The primary user is the admin where the primary actions include creation of user profile for secondary admin and general users. The secondary admin will be responsible for the creation of projects, modify them and add users to the projects but will not be able to remove the team members. Finally comes the general user where the actions include creation of log of activities being made at any given point of time which will be used in summarizing the status of the projects assigned to the teams. The general users will be able to view the actions being performed by the fellow team mates, modify or export them and display them by reordering based on certain constrains. On the other hand, the secondary admin will be able to view the actions being performed by the project members and other project members but not modify the log entries but the primary admin can modify the log entries, team members of the project and others. Apart from this the users will be able to upload the documents such as text files, pictures and others which can be used by them for the future references. The users will also be able to obtain the profile of the users or the list of actions performed by just providing the name or ID of the which creates an internal search option for the users and the tasks that have scheduled for each user by the admin can also be viewed as list of actions on a given calendar date creating calendar of events.

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## **1. Project Description**

The engineering book is a sample web based application where the user will be able update the details about the projects the user is working on and other important information. Apart from this the web application will be having three levels of users where each user will be having action based on the level of authentication and other constrains.

### **1.1. Competitive Information**

In the present market, there are many web applications which are used by the companies for the organization of information and other activities. They help the companies in keeping a track of information by which the status of all the activities can be known by them. Apart from this if anything goes wrong the accountability for the issues can be identified by the organizations with much ease. This kind of web application helps the users to increase the productivity and also the efficiency of the resources.

### **1.2. Relationships to other projects**

As we know there are hundreds of similar web applications in the market where the users will be able to handle the similar activities with much ease and in a much efficient way. apart from this the most of the functionalities that have been shown in the project can be seen in the other projects and in some cases the relationships will be used to create a much better web application.

### **1.3. Assumptions and Dependencies**

The assumptions that have been made for the development of this project are list as below.

- The efficient use of time to complete the work in time and deliver the project.
- The resource management plays a vital role where any loss of the resources must be balanced with the other available resources.
- The usage of financial resources is also important where all the money need to be accounted.

### **1.4. Future Enhancements**

At present a simple design for the web application has been developed where the minimal usage of any form of graphics are seen for the web application and in the future enhancements the web application with much better graphical interface will be developed. At present, there is no email confirmation to the users upon creation of any projects or teams and in the future enhancements the users will be able to receive the email confirmation for the any form of activities that can be seen at the application.

## **2. Technical Description**

The web application is being developed using C# .Net at the front end and MS SQL at the backend where the Visual Studio 2015 is being used as the integrated development environment for the application with MS SQL Server management studio is also used to deal with the database. Apart from this in the future the web application will be hosted and

## **2.1. Project Architecture**

The web application used the three-tier architecture which are as follows.

- **Presentation Layer**  
The presentation layer mainly consists of the design elements for the web application.
- **Logical Layer**  
The logical layer consists of the underlying logic that is used to communicate and update the database objects.
- **Database Layer**  
Finally, the database layer consists of the tables, stored procedures and other elements which are used to store the data.

Thus, the three-tier architecture has been successfully implemented in the web application.

## **2.2. Project Information Flow**

The users in the web application are divided into three levels which are as follows.

- **Primary Admin**
- **Admin**
- **User**

### **2.2.1. Primary Admin**

The primary admin deals with the creation of projects, creation of the teams and other activities. The primary admin has the complete control over the data flow in the application where the data manipulation activities can be performed by the primary admin.

### **2.2.2. Admin**

The admin deals with the assignments of projects where the users will be able to update the list of actions that have been performed by them. Apart from this the admin will be able to assign the users to the team by which the regular users will be able to create entries for the assigned projects.

### **2.2.3. General User**

The primary actions that can be performed by the user would be creation of entries and uploading any documents if necessary. The primary action would be the creation of logs and apart from this the process of viewing the list of logs and other activities can be performed by the user.

## **2.3. Application Capabilities**

The below are the actions that can be performed at the web application.

- **Creation of projects.**
- **Creation of teams**

- Assigning users to the teams
- Creation of entries for the projects.
- Uploading the documents
- Creating pdf version of then entries.
- Creation of events that can be performed
- Addition of the users.
- Updating the personal information of the users.
- Deactivating the users.

## 2.4. Risk Assessment and Management

Risk management mainly deals with the completion of the project in time. The primary cause that may lead to any form of delay in the delivery of the project would be the efficient use of resources where the loss of any resources need to be balanced by the usage of the other resources. By this, there is a much better probability to complete the project in time.

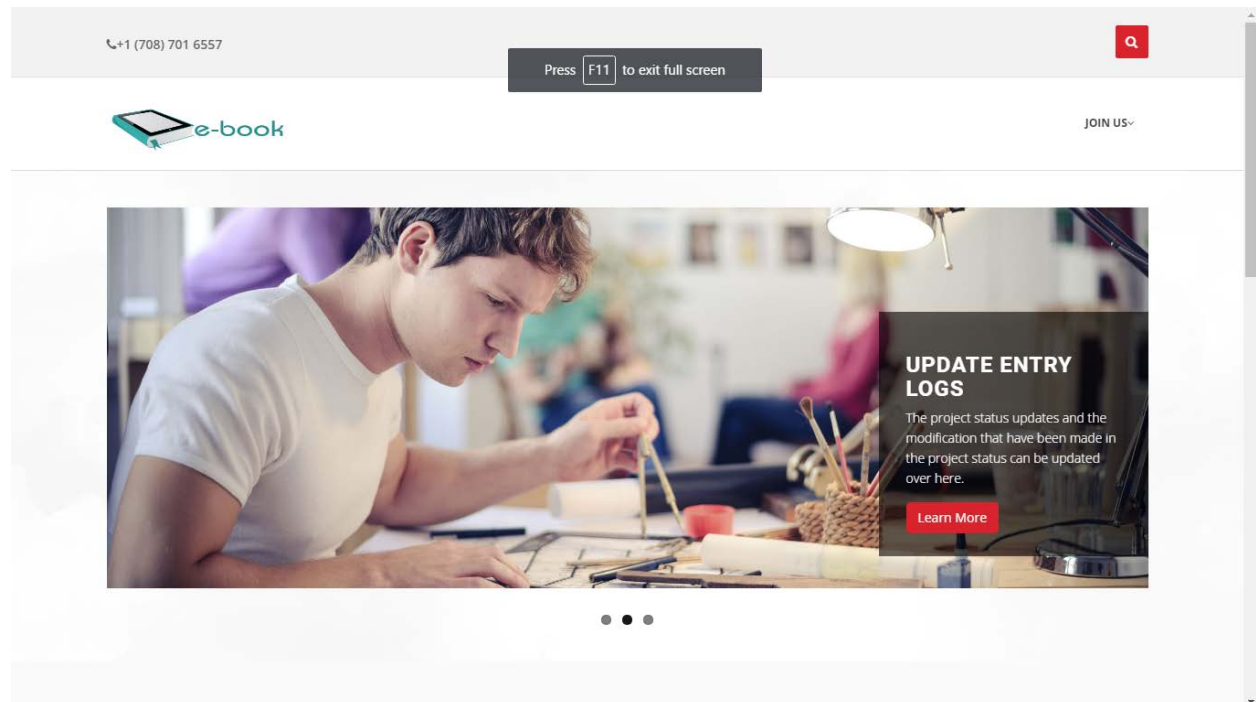
## 3. Project Requirements

The project requirements reflect the functionality of the web application where the features that will be available to the users can be identified.

### 3.1. Identification of Requirements

The below are the list of requirements and the associated screenshot for the feature that has been implemented

#### <EnginereingNotebook-1- HomePage-1 >



## <EngineeringNotebook-1- Project Creation- 2>

The screenshot shows the 'Assign Team Mates' page. At the top left is the 'e-book' logo. The navigation menu includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail shows 'Home / Entry Logs / View Entriers'. The main form has three dropdown menus: 'Team Name' (selected 'samle'), 'Project Name' (selected 'samle'), and 'Member Name' (empty). Below the 'Member Name' dropdown is the text 'All users have assigned teams.' and an 'Add Teammate' button. Below the form is a 'Team Members List' section. The footer contains '© Engineering Notebook' and a status bar with 'Waiting for engbook.today...'.

## <EngineeringNotebook-1-Assigning Teams -3>

This screenshot is identical to the one above, showing the 'Assign Team Mates' page. The navigation and breadcrumb are the same. The form fields are: 'Team Name' (selected 'samle'), 'Project Name' (selected 'samle'), and 'Member Name' (empty). The text 'All users have assigned teams.' and the 'Add Teammate' button are present. Below the form is the 'Team Members List' section. The footer contains '© Engineering Notebook' and a status bar with 'asda asdasd'.

## <EngineeringNotebook-1- Teams Creation-4 >

The screenshot shows the 'Create Teams' page. At the top left is the 'e-book' logo. The top navigation bar includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail below the navigation bar reads 'Home / Teams / Create Teams'. The main content area is titled 'Create Teams' and contains two dropdown menus: 'Project Name' with the value 'test' and 'Team Lead ID' which is empty. Below the 'Team Lead ID' dropdown is a message: 'No team leads available. Please add another user.' A red 'Create Team' button is positioned at the bottom right of the form. The footer contains the text '© Engineering Notebook' and 'asda asdaad'.

## <EngineeringNotebook-1- View Entries-5 >

The screenshot shows the 'View Entries' page. At the top left is the 'e-book' logo. The top navigation bar includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail below the navigation bar reads 'Home / Entry Logs / View Entries'. The main content area is titled 'Project Entries' and contains two dropdown menus: 'Project ID' with the value 'sample' and 'Entry Details' with the value 'sd'. A red 'Get Data' button is positioned below the dropdowns. Below this is a 'Results' section with a table-like structure. The table has two rows and two columns. The first row has 'Title' with the value 'sd' and 'Description' with the value 'klsdfj'. The second row has 'Created By' with the value 'adithya varma' and 'File Name' with the value 'LogDetails4-25-2017-11-46-48 AM.pdf'. The footer contains a small upward arrow icon.



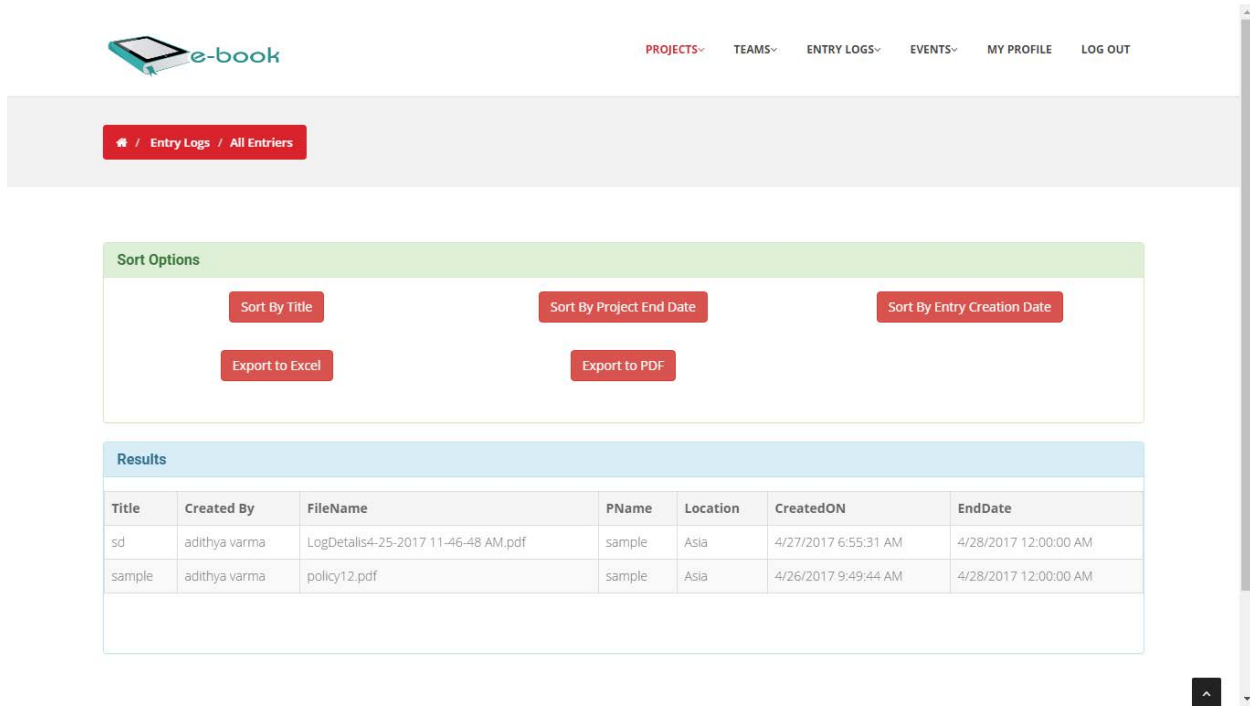
## <EngineeringNotebook-1- Create Logs- 6>

The screenshot shows the 'Create Project Entry' form. At the top left is the 'e-book' logo. The navigation menu includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail reads 'Home / Entry Logs / Create an Entry'. The form itself has a green header 'Create Project Entry' and contains the following fields: 'ProjectID' (a dropdown menu with 'sample' selected), 'Entry Title' (a text input field), 'Entry Description' (a large text area), and 'File' (a 'Choose File' button with the text 'No file chosen'). A red 'Create Entry' button is positioned at the bottom center of the form. The footer contains the text '© Engineering Notebook' and 'asda asdasd'.

## <EngineeringNotebook-1- Edit Logs-7 >

The screenshot shows the 'Edit Project Entry' form. At the top left is the 'e-book' logo. The navigation menu includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A tooltip above the menu says 'Press F11 to exit full screen'. A breadcrumb trail reads 'Home / Entry Logs / Edit Project Entry'. The form has a green header 'Edit Project Entry' and contains the following fields: 'Entry Details' (a dropdown menu with 'sd' selected), 'Entry Description' (a large text area), and an 'Update' button at the bottom center. The footer contains the text '© Engineering Notebook' and 'asda asdasd'.

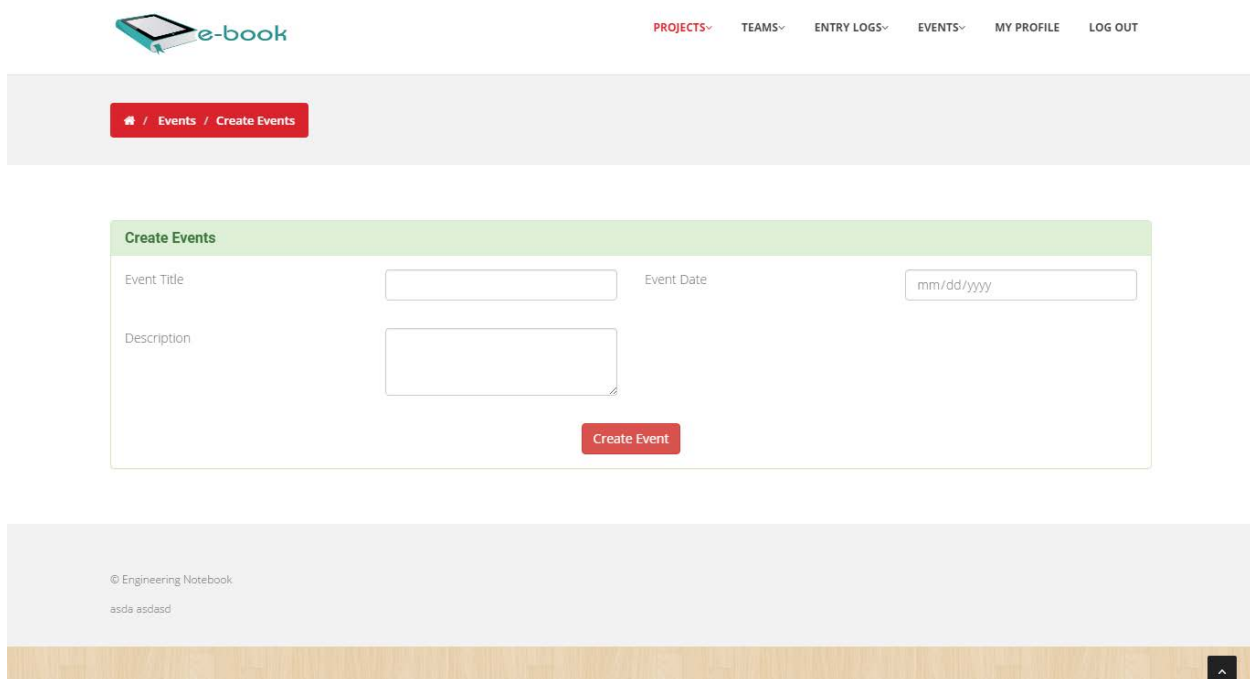
## <EngineeringNotebook-1-Download Logs-8 >



The screenshot shows the 'Entry Logs' page. At the top left is the 'e-book' logo. The navigation menu includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail reads 'Home / Entry Logs / All Entries'. Below this is a 'Sort Options' section with buttons for 'Sort By Title', 'Sort By Project End Date', 'Sort By Entry Creation Date', 'Export to Excel', and 'Export to PDF'. The 'Results' section contains a table with the following data:

Title	Created By	FileName	PName	Location	CreatedON	EndDate
sd	adithya varma	LogDetails4-25-2017 11-46-48 AM.pdf	sample	Asia	4/27/2017 6:55:31 AM	4/28/2017 12:00:00 AM
sample	adithya varma	policy12.pdf	sample	Asia	4/26/2017 9:49:44 AM	4/28/2017 12:00:00 AM

## <EngineeringNotebook-1- Create Events-9 >



The screenshot shows the 'Create Events' page. At the top left is the 'e-book' logo. The navigation menu includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail reads 'Home / Events / Create Events'. The 'Create Events' form includes fields for 'Event Title', 'Event Date' (with a placeholder 'mm/dd/yyyy'), and 'Description'. A 'Create Event' button is located at the bottom of the form. The footer contains the text '© Engineering Notebook' and 'asda asdasd'.

## <EngineeringNotebook-1- View Events- 10>

### Events

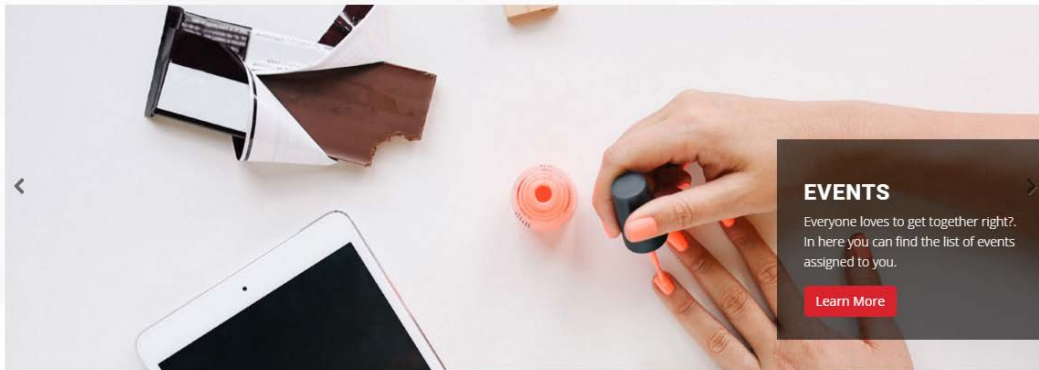
April 2017						
S	M	T	W	T	F	S
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

### Event Details

Title:  Created By:

Description:

## <EngineeringNotebook-1- Multimedia Items -11 >




### Engineering Notebook

Your personal assistant is all set and ready for you. All you got to do is login.

[Log In >](#)

## <EngineeringNotebook-1- Edit Personal Info- 12>



PROJECTS▼ TEAMS▼ ENTRY LOGS▼ EVENTS▼ MY PROFILE LOG OUT


Home / My Profile

### Update Details

UserID	<input type="text" value="adithya a varma"/>		
Password	<input type="text"/>	Confirm Password	<input type="text"/>
Security Question	<input type="text"/>	Security Answer	<input type="text"/>

© Engineering Notebook  
asda asdasd

## <EngineeringNotebook-1- View Profile-13 >



PROJECTS▼ TEAMS▼ ENTRY LOGS▼ EVENTS▼ MY PROFILE LOG OUT

Home / My Profile

### Update Details

UserID	<input type="text" value="adithya a varma"/>		
Password	<input type="text"/>	Confirm Password	<input type="text"/>
Security Question	<input type="text"/>	Security Answer	<input type="text"/>

© Engineering Notebook  
asda asdasd

## <EngineeringNotebook-1-View Projects-14>

The screenshot shows the 'View Projects' page. At the top left is the 'e-book' logo. The top navigation bar includes 'PROJECTS', 'TEAMS', 'ENTRY LOGS', 'EVENTS', 'MY PROFILE', and 'LOG OUT'. A breadcrumb trail below the navigation bar reads 'Home / Projects / View Projects'. The main content area features a 'Project Selection' section with a 'Project ID' dropdown menu set to 'sample' and a 'Get Data' button. Below this is a 'Results' section containing a table with the following data:

ProjectID	Project Name	Project Start Date	Project End Date	Project Created By	Location	Active Number of Resources	Resources On Bench
sample	sample	4/27/2017 12:00:00 AM	4/28/2017 12:00:00 AM	adithya	Asia	1	1

At the bottom left, there is a copyright notice: '© Engineering Notebook'.

## <EngineeringNotebook-1-Search-15>

The screenshot shows the 'Search' page. At the top left is the 'e-book' logo. The top navigation bar includes 'JOIN US'. A contact number '+1 (708) 701 6557' is displayed on the left. A search bar on the right contains the placeholder text 'Enter your search term...' and a search icon. Below the navigation bar is a promotional banner for 'UPDATE ENTRY LOGS'. The banner features a photograph of a young man working in a lab. The text on the banner reads: 'UPDATE ENTRY LOGS. The project status updates and the modification that have been made in the project status can be updated over here.' A 'Learn More' button is located at the bottom of the banner.

## <EngineeringNotebook-1- Authorization-16 >

The screenshot shows the login interface of the Engineering Notebook application. At the top left, there is a logo for 'e-book' featuring a book icon. To the right of the logo, the text 'JOIN US' is visible. Below the logo, a red button with a home icon and the text '/ Login' is present. The main content area is a light green box titled 'Login'. Inside this box, there are two input fields: 'UserID:' with the value 'adithya' and 'Password:' with masked characters '....'. A red 'Login' button is positioned below the password field. At the bottom of the page, there is a footer with the text '© Engineering Notebook' and 'asda asdasd'.

## <EngineeringNotebook-1- Registration-17 >

The screenshot shows the registration interface of the Engineering Notebook application. At the top left, there is a red button with a home icon and the text '/ Join Us / Register'. The main content area is a light green box titled 'Register'. Inside this box, there are several input fields and a dropdown menu arranged in two columns. The fields include: 'UserID', 'Password', 'First Name', 'Last Name', 'Mobile', 'Street', 'State', 'Role' (a dropdown menu currently showing 'User'), 'Confirm Password', 'Middle Name', 'Email ID', 'City', and 'Zipcode'. A red 'Create User' button is located at the bottom center of the registration form.

### **3.2. Operations and Administrations**

The primary operation that can be seen in the web would be the project management where the user will be to create new projects and assign the users to the projects. Then once the users are able to gain access to the web application the users will be able to update the actions in the web application.

### **3.3. Security and Fraud Prevention**

The authorization of the user and checking the level of authenticity of the user who signed into the application can be seen at each page level. This form of authentication makes sure that all activities of the user are monitored. Apart from this the actions of the users will be recorded in the pages where each and every action performed by the user will be recorded in the database.

### **3.4. Release and Transition plan**

The website is hosted online at the Go Daddy server with the link as <http://engbook.today/> and is also live now.

## **4. Project Design Description**

The project design can be primarily categorized into three which are as follows

### **4.1. Data Flow**

#### **4.1.1. Adding Projects**

In here the users with primary admin will be able to perform actions such as creation of projects and others. All the activities that are performed by the user will be monitored.

#### **4.1.2. Adding Teams**

In here the users with the admin level of access will use this function mostly where the creation of new teams, assigning the team mates to the teams and other functionalities can be seen.

#### **4.1.3. Adding Logs**

In here the regular users will use the actions mostly where adding of logs, uploading the concerned documents, editing the logs and downloading the logs will be the most performed actions.

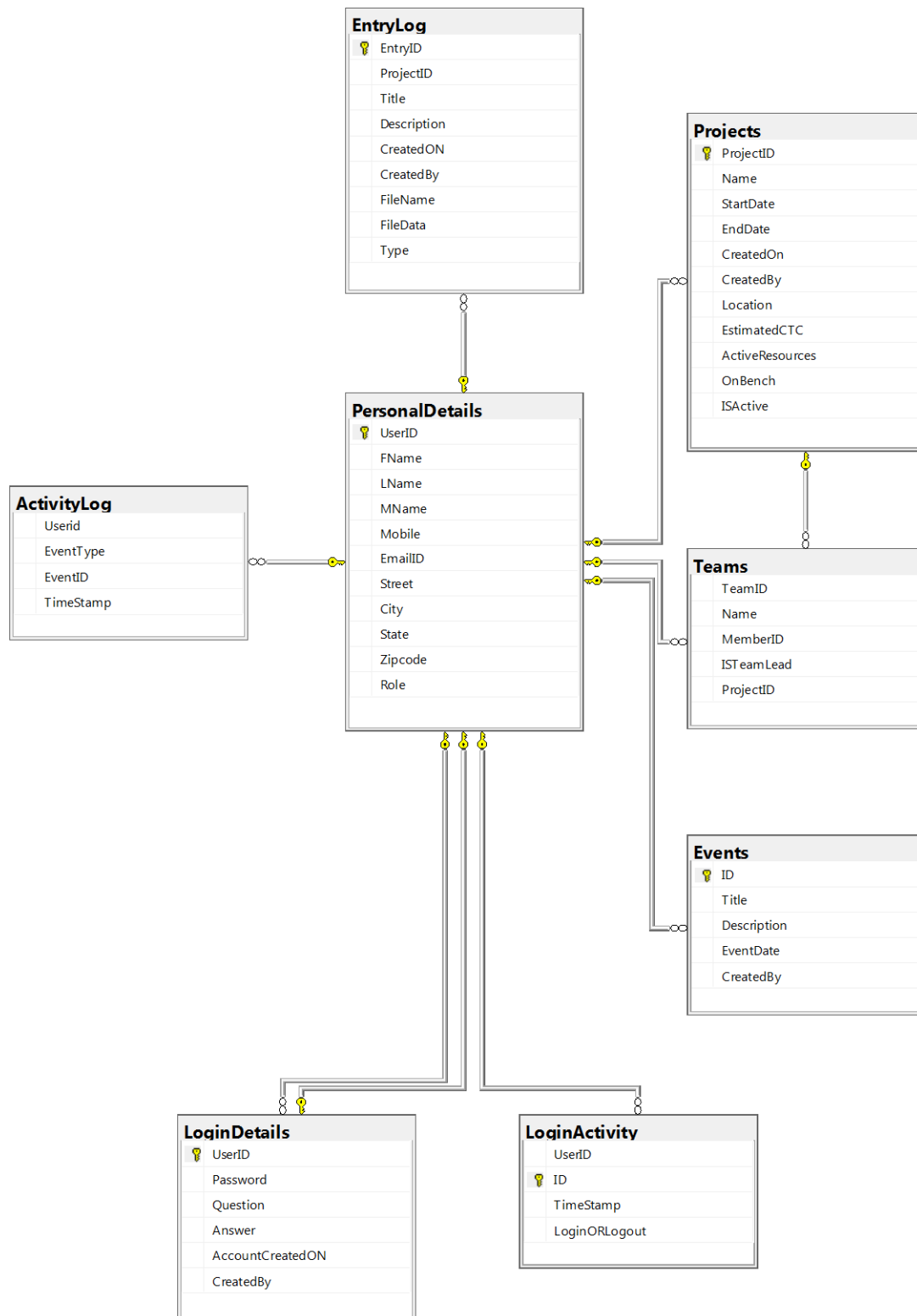
#### **4.1.4. Adding Users**

In here the process of adding more users to the web application and modification of the personal information of the users can be seen.

## 4.2. Database Design

The below database diagram depicts the relationships between the tables that have been used in the web application.





## **5. Project Design Units**

As specified above, in this web application there would be three levels of users where they are as below.

- Primary Admin
- Admin
- General User

## **6. Open Issues**

The web application does not provide any views for the uploaded documents where in the future enhancements this will implemented.

## 7. References

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