

B.Sc. in Computer Science and Engineering Thesis

Design and Development of Integrated Event Messaging System

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CERTIFICATION

This thesis paper titled “**Design and Development of Integrated Event Messaging System**”, submitted by the group as mentioned below has been accepted as satisfactory in partial fulfillment of the requirements for the degree B.Sc. in Computer Science and Engineering on December 2013.

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CANDIDATES' DECLARATION

This is to certify that the work presented in this thesis paper is the outcome of the investigation and research carried out by the following students under the supervision of Dr. Syed Akhter Hossain, Professor, Head of the CSE department, Daffodil International University, Dhaka, Bangladesh.

It is also declared that neither this thesis paper nor any part of the paper has been submitted anywhere else for the award of any degree, diploma or other qualifications.

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ABSTRACT

Time is the most important factor in the modern era. The importance of utilization of time in the best possible manner is increasing rapidly with the development of technology. The number of events has to be performed by any organization or institution is growing, since the requirements are increasing enormously. To manage or organize an event in an efficient manner with the given time is the first priority to any organization.

The rapid transformation of technologies opened a desired solution to manage a growing number of events efficiently seamlessly. If we can integrate the events with the organizer and can put the required information in the right place and at the right time, it will be possible to avoid lot of communication hazards and confusion in organizing the event.

In our thesis, we tried to develop a prototype system, Integrated Event Messenger (IEM), an information system which will be able to manage or organize various events of an organization seamlessly. Thereby the chances of making error in performing the task manually will be minimized. If any organization uses this IEM effectively, it will be able to manage a huge amount of tasks in a shortest possible time. In this thesis, for web application module, we used PHP (for layout design) and MySQL (for database). The system will be able to group the people of the organization as per the upcoming events beforehand. The system will also send SMS containing required information to organize the event to the concerned people. The entire system will be controlled by an administrator who will be responsible to accept or reject the requests from the members of the organization. If the request is accepted, the member will be considered as the User who will be able to initiate SMS.

In this thesis, we have developed the system which is a prototype in nature and which will be able to manage the requirements of a small organization. But it has the flexibility to expand as per the requirement of the organization.

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LIST OF ABBREVIATION

- IEM** : Integrated event messaging system
HTML: Hyper Text Markup Language
CSS : Cascading Style Sheet
IDE : Integrated Development Environment
SRS : Software Requirement Specification

CHAPTER 1

INTRODUCTION

1.1 Introduction

Modern era is fast and full of sophisticated technologies. These technologies are changing very rapidly and the base of the advancement is computer. To keep pace with modern technologies, one should fully utilize the facilities provided by computer. Along with the advancement of technology, the requirements of the users like event management, working environments etc are changing. The requirement of right information in right time at right place is valued highly. To make a system effective, one should fully utilize the information, time and place judiciously.

1.2 The Objective of This Thesis

The objective of this paper is to present a detailed description of the Integrated Event Messenger (IEM). It will explain how we are going to reduce worries, and to develop some web applications, so that anyone can send a message to a group of people at a time in order to inform about some upcoming events.

1.3 Motivation

Various organizations or institutes need to organize various events within or outside the organization. The nature of the events varies from institution to institution. To organize the events, the institutions or organizations need to send message to a group of people who all are designated for organizing the event successfully. At times, it becomes very difficult for a person to send same message to a group of people manually. It develops huge confusion, if any of the organizers misses the important message. If we think about a system which can do this job automatically, then it will be very effective, neither any organization will need to

worry about inform neither any event to their clients nor any institutes. For this reason, we are going to create a portal for event as sender based on web application.

1.4 Layout of Report

In the introductory chapter, it includes the objectives and motivation of the project. It also includes the overall brief of the project in the layout of report section. The next chapter includes the Literature Review which narrates Event Messaging System, Components of IEM, potential challenges, effective utilization of IEM, etc. The third chapter includes SRS of proposed system which narrates Use Case model, Use Case design, database model (ERD) and technology platform and framework. Chapter 4 discusses about the design of the proposed system which includes database schema, GUI, navigation plan, template and home page; MVC architecture. Chapter 5 will narrate implementation and testing which will briefly discuss implementation using code igniter, and testing (unit testing, integration testing). The last chapter will discuss the outline of our achievement so far. This chapter will also include some ideas which is not implemented yet and some features which might be added to our application in future.

1.5 Summary

In this chapter we have discussed the problems, objectives and motivation of the project. Our purpose to make this project becomes very clear in this chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Event Messaging System

Event messaging system is a portal for event as sender based on web application. The users will be able to login to the web page and to send messages to a number of people, he will need to create new event. He will need to give the message, date and time (when the message will be sent) and also has to create a list of people who will receive the alert message on time. For the first time to send any message, he will need to create an account by sign up. Then he will become a member and can send messages automatically. Again we will need to develop a mobile application by which the user will be able to access the web site, he can also sign up or login using that mobile application.

2.2 Components of IEM

The relation between components are shown in figure 2.1.

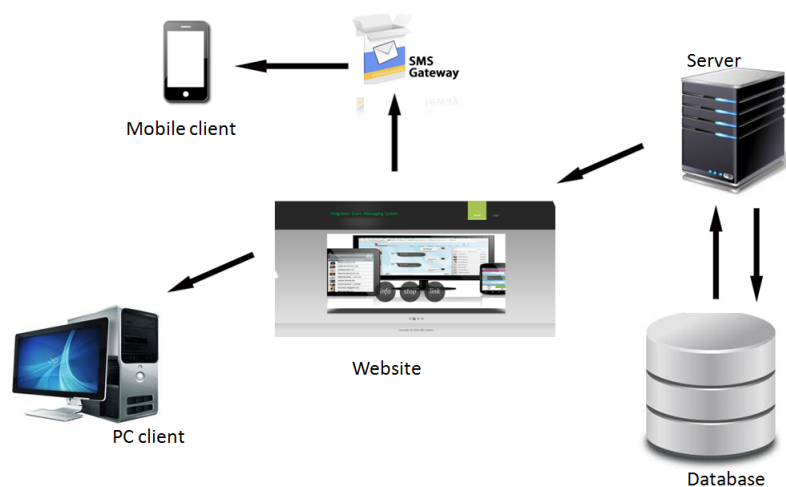


Figure 2.1: Components of IEM System

To access the system we would require a website. The website is connected with database through the server. The website should be accessed using PC(computer). To send SMS from website to the mobile client we require SMS gateway. So when any event is created in the website then SMS is send to the mobile from website via the gateway.

2.3 Potential Challenges

Each and every organization has lot of events to organize where the organization needs to employ its member effectively. If the coordination is done manually, the chances of missing of messages are more which may offer lot of confusions and problems. If any important member of the event organizing team does not receive the required message send by the administrator, the whole event may be jeopardize. The grouping of people on demand basis may also create problem. If the grouping of events organizing team is done earlier, every member knows his job before hand with a positive set of mind. That is why Even Messaging System is desired by the organizations. This system will perform the coordination for event organization automatically

2.4 Effective Utilization of IEM

Effective utilization of IEM by any organization will be ensured if the upcoming events of the organization are correctly predicted earlier and for each event, grouping of people to organize the event is done earlier effectively and there is a smooth and accurate message generating web application is present. It has to be ensured that the whole system is controlled strictly by an administrator who is responsible for accepting or rejecting or updating member requests. If the effective utilization of IEM is done correctly, then events will be organized with ease and with least possible time.

CHAPTER 3

SYSTEM REQUIREMENT SPECIFICATION OF PROPOSED SYSTEM

3.1 Introduction

This chapter enlists all necessary requirements for project development. To derive the requirements we need to provide clear and thorough understanding of the products to be developed. Above all it depicts all data, use cases and scenarios, data model, functional and non-functional requirements, interface and behavioral models and restrictions and validation criteria and necessary supplementary information that are specific to the system to be implemented.

3.2 System Requirement Analysis

System requirement analysis is a complete description of the behavior of a system to be developed and may include a set of use cases that describe interactions the users will have with the software. In addition it also contains non-functional requirements.

3.3 Functional Requirements Specification

The use case models and design of the use cases for each actors or roles are described in the subsections.

3.3.1 Use Case Model

General User Use Case

The use case of general user is shown in figure 3.1.



Figure 3.1: General User Use Case Model

Sign Up Use Case of General User :

Brief Description

Mass people can send a request to the administrator for being a user of the system.

Initial Step-By-Step Description

If the user is not an authorized user by the admin, then the user is general user. S/he needs to send a request to the admin to be an authorized user.

1. General user will select the not register link for sending a request to the administrator.
2. System will provide a form to the user for filling up.
3. The user will fill up the form and admin will be sent a notification.
4. When admin will accept the request general user will become an authorized user.

Administrator User Use Case

The administrator use cases are shown in figure 3.2.

Approve User Use Case of Administrator :

Brief Description

Administrator will approve or reject the requests coming from general users.

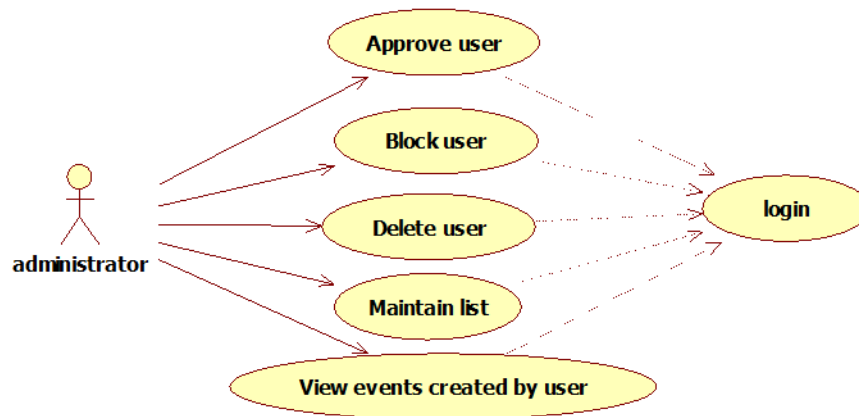


Figure 3.2: Administrator User Use Case Model

Initial Step-By-Step Description

Administrator can approve or reject any request coming from general user. When he approves or rejects a mail is generated to the user notifying him about being approved or rejected.

1. Administrator will select the notifications to see the pending requests.
2. Administrator will be provided with the option either to accept the request or to reject it.
3. Administrator will either accept or reject the request. After the administrator accept the request the general user will become the authorized user of the system

Maintain List Use Case of Administrator:

Brief Description

Administrator will be able to add any new member of the organization based on groups. He also has the authority to delete any member from the list if the member is no longer a member of the organization or restore any one from the deletes list.

Initial Step-By-Step Description

Administrator maintains the members of the organization through this use case.

1. Administrator will select the insert new member button.
2. System will provide a form to the administrator to fill up.
3. Administrator will fill up the form by giving the information about the members.
4. Thus the system will store those information for the member.
5. Admin can delete any member if he wants to.
6. The deleted members will be stored in the previous member option.
7. By choosing that option administrator will be able to restore the member as per his wish.

Block User Use Case of Administrator:

Brief Description

Administrator will be able to block any current user and also will be able to unblock them.

Initial Step-By-Step Description

This use case gives the administrator a way to block user if any activity of he user seems to be unhealthy for the organization.

1. Administrator will choose the current user option.
2. He will be provided with the current users of the system with the option to block them.
3. After choosing the block option the user will be blocked.
4. The user will be stored in the blocked user option.
5. By choosing blocked user the administrator will be provided with option to unblock them.
6. When administrator chooses the unblock option the user will be current user again.

Delete User Use Case of Administrator :

Brief Description

Administrator will be able to delete any current user or member if the member is no longer in the organization and also will be able to restore them if a member is deleted by the administrator for his mistake.

Initial Step-By-Step Description

If a member is no longer in the organization he will also be deleted from the user list. This use case provides the administrator this option.

1. Administrator will choose the current user option.
2. He will be provided with the current users of the system with the option to delete them.
3. After choosing the delete option the user will be deleted.
4. The user will be stored in the deleted user option.
5. By choosing deleted user the administrator will be provided with option to restore them.
6. When administrator chooses the restore option the user will be current user again.

View Events Created by Users Use Case of Administrator: :

Brief Description Administrator can also keep track of which user is creating which events. So that if he feels that any type of events can bring harm to the organization he can block or delete the user.

Initial Step-By-Step Description

1. Administrator needs to select user option.
2. Then the administrator needs to select the show details option.
3. System will provide with the events created by the particular user.

Authorized User Use Case

The use case of authorized user is shown in figure 3.3.

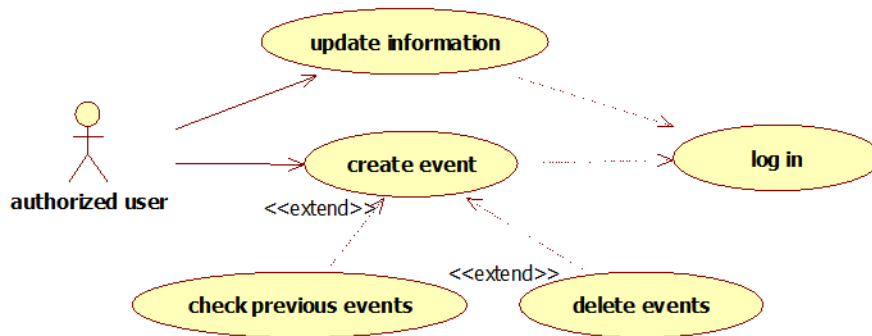


Figure 3.3: Authorized User Use Case Model

Update Information Use Case of Authorized user:

Brief Description

As the user is a member of the organization he has his information (name, e-mail, contact-no etc) stored in the database. He can update these information as he will be notified about any event via his e-mail and contact-no. So he is given an option to change these information whenever he requires it.

Initial Step-by-Step Description

1. The authorized user chooses the update option after logging in by providing correct user name and password.
2. Then he will be provided with his information that is stored in the database.
3. He can update any of his information if he wants to.
4. Then after clicking the submit button the updated information will be stored in the database.

Create Event Use Case of Authorized User:

Brief Description

Any authorized user can create any event any time he wants.

Initial Step-by-Step Description

1. The authorized user will click the create event option.
2. Then a page will appear asking him about the event.
3. He needs to give input about the event name, message he wants to submit and the date and time when he wants to send the message.
4. After submitting the form the system will ask about the receivers by showing the members of the organization.
5. After selecting the members the authorized user needs to select the submit button.
6. He can also change any information about the event if he wants to even after submitting the receivers.
7. After being sure about the event he needs to click the final create event button.
8. Thus an event will be created and message will be send to the receivers at fixed time and date.

Check Previous Events Use Case of Authorized User:

Brief Description

The user can check the previous events he created.

Initial Step-by-Step Description

1. The user will click the events option after logging in.
2. He will be shown with the events he has created before with the information what he has sent and whom he has sent the messages.

Delete Events Use Case of Authorized User:**Brief Description:**

The users are provided with the option if he wants to delete any event.

Initial Step-by-Step Description:

1. The authorized user will select the events option.
2. System will provide the user with events he has already created that is already delivered or requested to be delivered with the option to delete any.
3. User can delete any event any time he wants.

3.3.2 Use Case Design

Use Case Name: Sign up

Actor: General User

Precondition: The user is not authorized user and must be a member of the organization.

Primary Path:

1. Enter user id.
2. Enter department.
3. Enter designation.
4. Enter contact-no.
5. Enter e-mail id.
6. Enter password.
7. Re-enter password.
8. Enter favorite question.
9. Click he 'Sign up' button.

Exceptional Path:

- 5.1. Invalid password, re-enter new password.
- 8.1. Did not match previous password, re-enter password.
- 9.1. User id, department, designation is not provided, provide the information.

Use Case Name: Approve user

Actor: Administrator

Precondition: Login

Primary Path:

1. Click notification.
2. Click approve user.

Exceptional Path:

- 2.1. If there is no new request, no notification will be shown.

Use Case Name: Block user

Actor: Administrator

Precondition: Login

Primary Path:

1. Click current users.
2. Click block user button.

Use case name: Delete user

Actor: Administrator

Precondition: Login

Primary Path:

1. Click current users.
2. Click delete user button.

Use case name: Maintain list

Actor: Administrator

Precondition: Login

Primary Path:

1. Click members button.

2. Click Insert members button.
3. Enter first name.
4. Enter last name.
5. Enter department.
6. Enter designation.
7. Enter contact-no.
8. Enter e-mail id.
9. Click the insert button.

Exceptional Path:

- 8.1. E-mail id invalid, re-enter e-mail id.
- 9.1. First name, department, designation, contact-no is not provided, provide the information.

Use Case Name: View events created by users.

Actor: Administrator

Precondition: Login

Primary Path:

1. Click users.
2. Click show details link.

Exceptional Path:

- 2.1. If there is no events created by the user a pop up box will appear saying there is no event created by the user.

Use case name: Update information

Actor: Authorized user

Precondition: Must be an authorized user (accepted by admin) and logged in.

Primary Path::

1. Click the account option.
2. His personal information will be shown to the user.
3. Can change any information if he wants to.
4. Press the update button.

Use case name: Create event

Actor: Authorized user

Precondition: Must be an authorized user(accepted by admin) and logged in.

Primary Path:

1. Click create event button.
2. Enter event name.
3. Enter message.
4. Enter date.
5. Enter time.
6. Click next button.
7. Select the department from the dropdown list.
8. Click select button.
9. Select the receivers.
10. Click the selected button.
11. Click the create event button.

Exceptional Path:

6.1. If one of the event name, message, date or time is not provided, message will appear to ask the user to provide it.

8.1. If none of the option is selected a message will appear to select an option.

10.1. If none of the user is selected a message will appear to select the user.

Use case name: Check previous events

Actor: Authorized user

Precondition: Must be an authorized user (accepted by admin) and logged in.

Primary Path:

1. Click the events option.
2. Events will be shown to the user.

Exceptional Path:

2.1. If user has not created any event then a message will be shown that there is no event created by him.

Use case name: Delete events

Actor: Authorized user

Precondition: Must be an authorized user (accepted by admin) and logged in.

Primary Path:

1. Click the events option.
2. Click the delete event button.

3.4 User Characteristics

The users (administrator, general user, authorized user) is expected to be Internet literate and be able to use internet's basic function.

3.5 Technical Requirements

Technology Requirements: The Design and development of integrated event messaging system will be developed using the following technology:

Development Technology:

1. Codeigniter framework (MVC)
2. HTML/CSS/Javascript

IDE:

1. Net beans

Database:

1. Mysql

Web-Application Server:

1. Wamp server

3.6 Summary

In this chapter we have discussed about the requirements, functionality, database model and user characteristics. The technology and tools used to build the system are discussed in last portion of this chapter.

CHAPTER 4

DESIGN OF PROPOSED IEM SYSTEM

4.1 Introduction

In this phase of software development process, the overall structure of the software, database structure, graphical look is defined. Any type of mistake in the database structure at this phase could be expensive in the development in the later phases.

4.2 Database Model

The database model(ER diagram) is shown in figure 4.1.

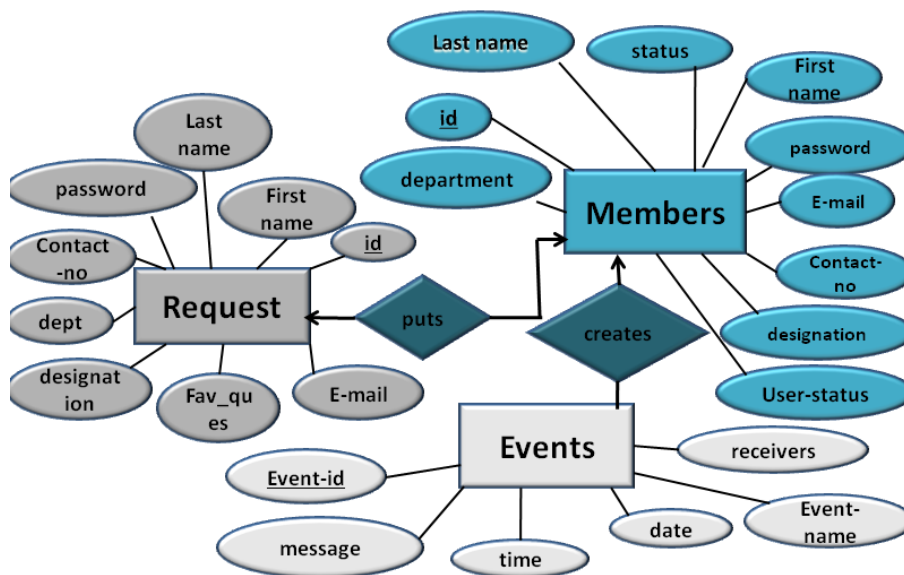


Figure 4.1: ER Diagram

The entire database has three basic tables such as members, requests and events. Members

table contains member id, first name, last name, password, contact-no, e-mail, designation, department, status and user-status. Whenever administrator inserts a new member the information is stored in this table. The request table posses id, first name, last name, password, contact no, department, designation, favorite-question, e-mail. Whenever a member (general user) sends a request for being an authorized user this information goes to the request table. Then comes event table which has event id, event name message, time, date, receivers. Whenever an authorized user creates an event it is stored in the table.

4.3 GUI Model Interaction

4.3.1 Main Home Page for GUI Model Interaction

The main home page for GUI model interaction is shown in figure 4.2.

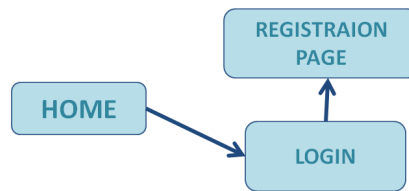


Figure 4.2: GUI Model Interaction of Home Page

Home Page

When administrator or user opens the website the home page appears with the login option. After logging in administrator and user gets different views.

The main home page view is shown figure 4.3.

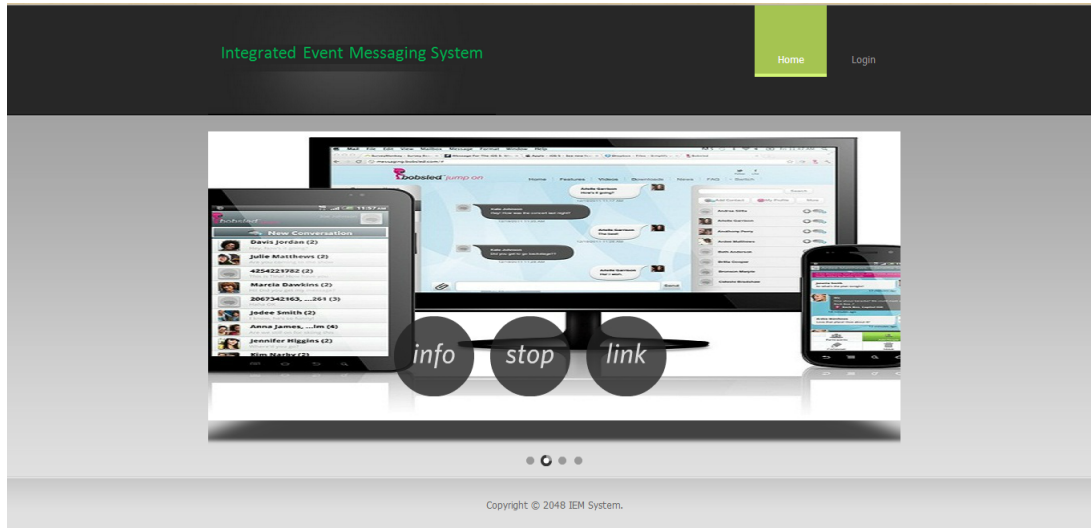


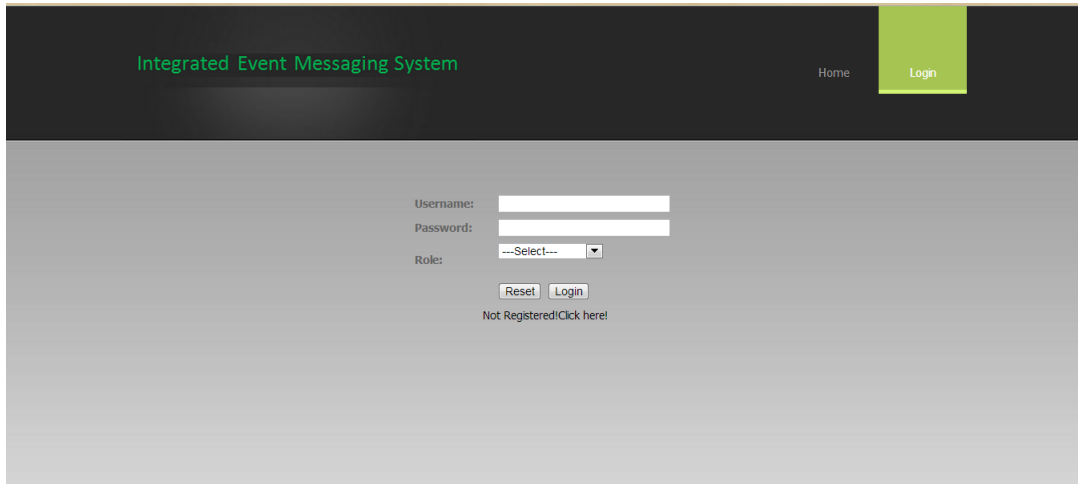
Figure 4.3: Home Page

As per the figure of main home page we can see that there are two options at the top of the page. One is Home and another one is Login. To login one needs to select the Login option.

Login Page

The login page contains a form asking the username, password and role from the user. It also has a link to the registration page.

The view of login page is shown in figure 4.4.



The screenshot shows the login page for the 'Integrated Event Messaging System'. The page has a dark header with the system name on the left and 'Home' and 'Login' links on the right. The 'Login' link is highlighted in green. Below the header is a light gray area containing a login form. The form has three input fields: 'Username:', 'Password:', and 'Role:'. The 'Role:' field is a dropdown menu with '--Select--' as the current selection. Below the input fields are two buttons: 'Reset' and 'Login'. At the bottom of the form area, there is a link that says 'Not Registered! Click here!'.

Figure 4.4: Login Page

If the user press login button with wrong username or password then a pop up box will appear saying that 'Invalid password or username' as shown in figure 4.5.

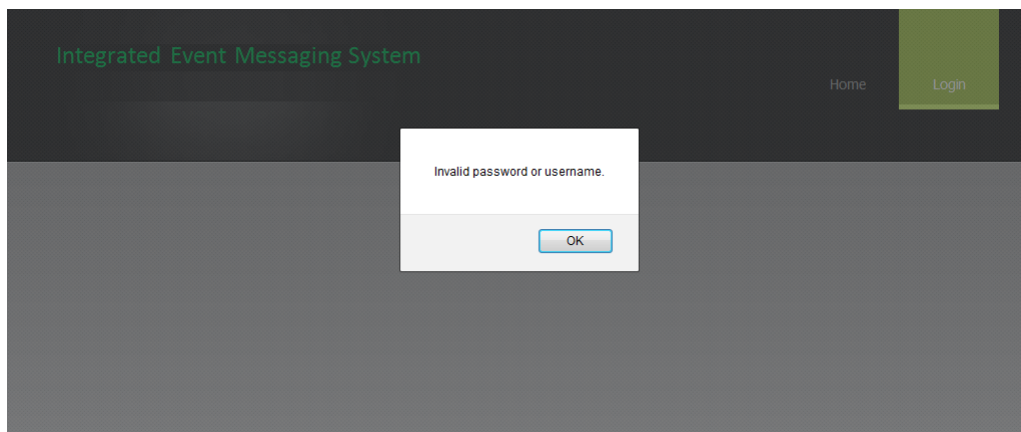
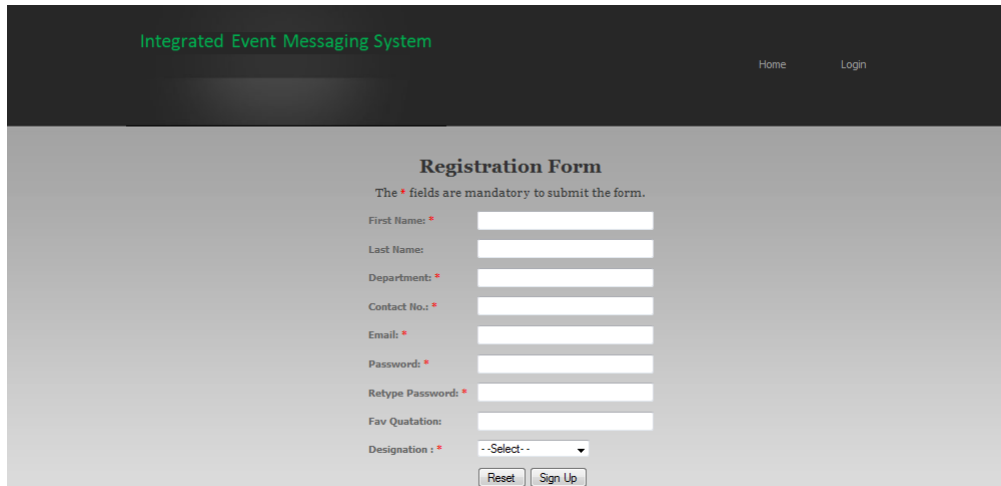


Figure 4.5: Login Page with Pop Up Box

Registration Page

This page contains a form asking the information from user and a submit button. When the user press the submit button after filling up the form this goes to he administrator.

The view page is shown in figure 4.6.



The screenshot shows a web page titled "Integrated Event Messaging System" with a dark header. In the top right corner, there are links for "Home" and "Login". The main content area is titled "Registration Form" and includes a note: "The * fields are mandatory to submit the form." Below this, there are several input fields: "First Name:" with a red asterisk, "Last Name:", "Department:" with a red asterisk, "Contact No.:" with a red asterisk, "Email:" with a red asterisk, "Password:" with a red asterisk, "Re-type Password:" with a red asterisk, "Fav Quotation:", and "Designation:" with a red asterisk and a dropdown menu showing "--Select--". At the bottom of the form, there are two buttons: "Reset" and "Sign Up".

Figure 4.6: Registration Page

In the registration form first name, department, designation, contact-no, e-mail and password fields are mandatory. If anyone submits the form without giving this fields the form is not submitted.

4.3.2 Administrator View for GUI Model Interaction

The administrator view for GUI model interaction is shown in figure 4.7. All the graphical interface for administrator is discussed below.

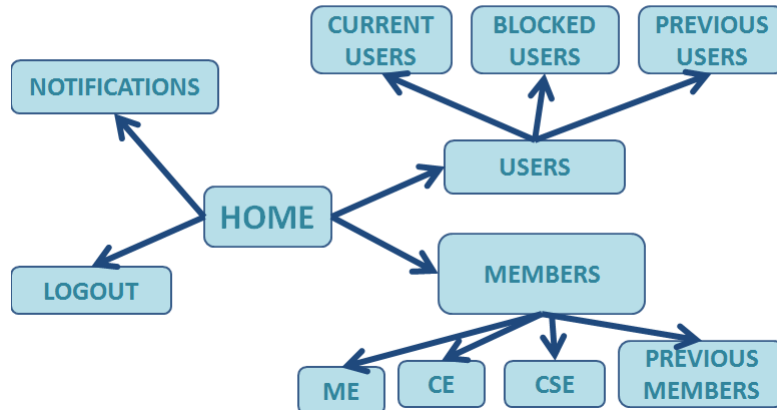


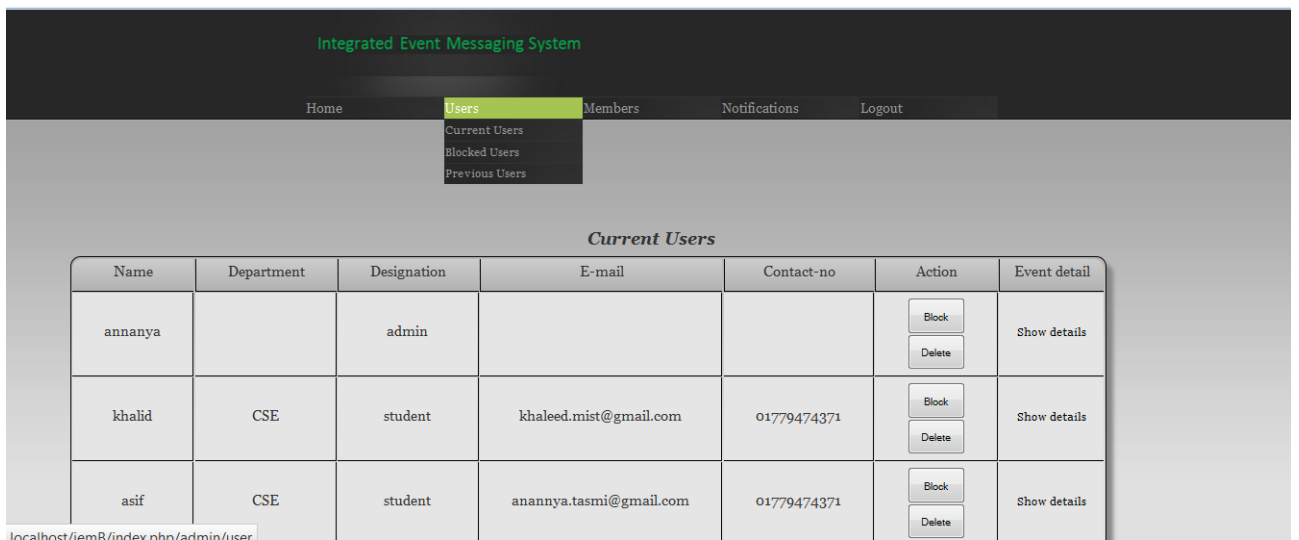
Figure 4.7: GUI Model Interaction of Administrator Home Page

Home Page:

Home page of administrator contains four basic pages members page, users page, notifications and logout page. Whenever a user is logged in as administrator he will get this view.

Users Page:

Users page of admin contains three options- current users, blocked users and previous users. The current users page contains the current users of the system with their information. In this page administrator can block or delete any user. The blocked users page contains the blocked users. If there is no blocked user a popup box will appear giving the alert that there is no blocked users. Similarly the previous users page posses the deleted users by the admin. The graphical interface of users page is shown in figure 4.8.



Current Users

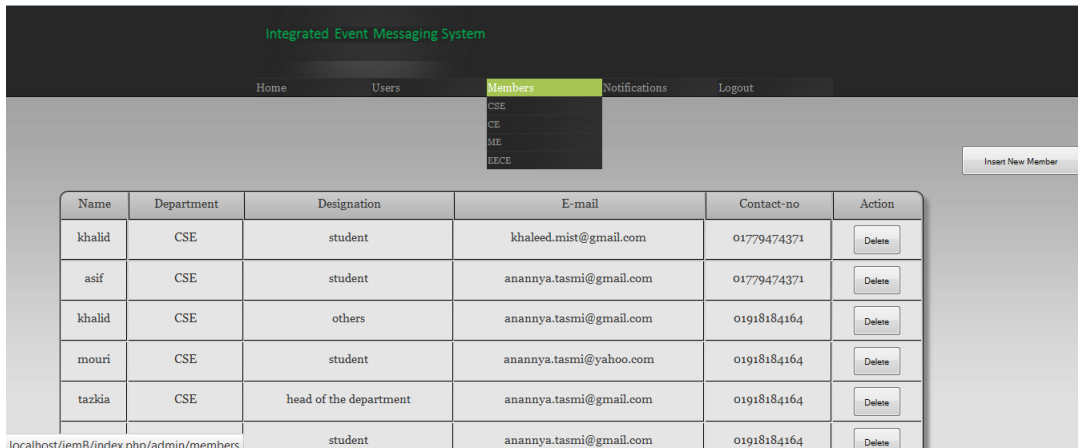
Name	Department	Designation	E-mail	Contact-no	Action	Event detail
annanya		admin			<input type="button" value="Block"/> <input type="button" value="Delete"/>	Show details
khalid	CSE	student	khaleed.mist@gmail.com	01779474371	<input type="button" value="Block"/> <input type="button" value="Delete"/>	Show details
asif	CSE	student	anannya.tasmi@gmail.com	01779474371	<input type="button" value="Block"/> <input type="button" value="Delete"/>	Show details

Figure 4.8: Users Page

Members Page:

Members page gives the administrator the option to insert any new member and administrator can view the members of different department and also can discard any member from the list.

The view is depicted in figure 4.9.



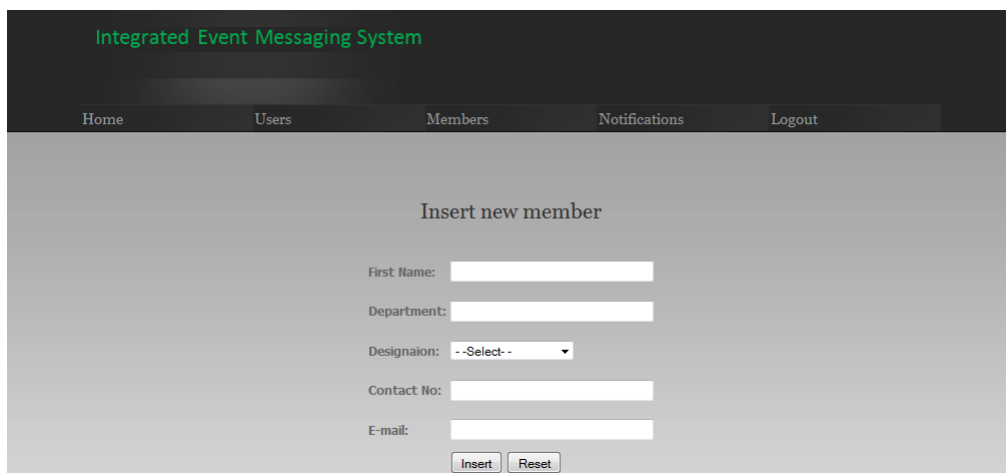
The screenshot shows the 'Members Page' of the 'Integrated Event Messaging System'. The navigation menu includes 'Home', 'Users', 'Members' (highlighted), 'Notifications', and 'Logout'. A dropdown menu is open under 'Members', listing 'CSE', 'CE', 'ME', and 'ECE'. A table displays a list of members with columns for Name, Department, Designation, E-mail, Contact-no, and Action. Each row has a 'Delete' button. An 'Insert New Member' button is located at the top right of the table area.

Name	Department	Designation	E-mail	Contact-no	Action
khalid	CSE	student	khaleed.mist@gmail.com	01779474371	Delete
asif	CSE	student	anannya.tasmi@gmail.com	01779474371	Delete
khalid	CSE	others	anannya.tasmi@gmail.com	01918184164	Delete
mouri	CSE	student	anannya.tasmi@yahoo.com	01918184164	Delete
tazkia	CSE	head of the department	anannya.tasmi@gmail.com	01918184164	Delete
		student	anannya.tasmi@gmail.com	01918184164	Delete

Figure 4.9: Members Page

As per the figure there is a 'Insert New Member' button at the right corner of the members page. After clicking this button a new form appears asking the information of member.

The GUI of this page is shown in figure 4.10.



The screenshot shows the 'Insert new member' form. The navigation menu includes 'Home', 'Users', 'Members' (highlighted), 'Notifications', and 'Logout'. The form has the following fields: 'First Name' (text input), 'Department' (text input), 'Designation' (dropdown menu with '--Select--'), 'Contact No' (text input), and 'E-mail' (text input). There are 'Insert' and 'Reset' buttons at the bottom of the form.

Figure 4.10: Insert New Members Page

Notification Page:

This page contains the notifications coming from the general users. The GUI of the page is shown in figure 4.11.

FirstName	LastName	Department	Designation	Contact-no	Email-id	Approve/Reject
tropa	mahmud	ME	faculty member	01779474371	anannya.tasmi@gmail.com	<input type="button" value="Approve"/> <input type="button" value="Reject"/>
Hanifa	Islam	ME	student	01779474371	anannya.tasmi@gmail.com	<input type="button" value="Approve"/> <input type="button" value="Reject"/>

Figure 4.11: Notifications Page

4.3.3 Authorized User View for GUI Model Interaction

The GUI model for authorized user is given in figure 4.12.

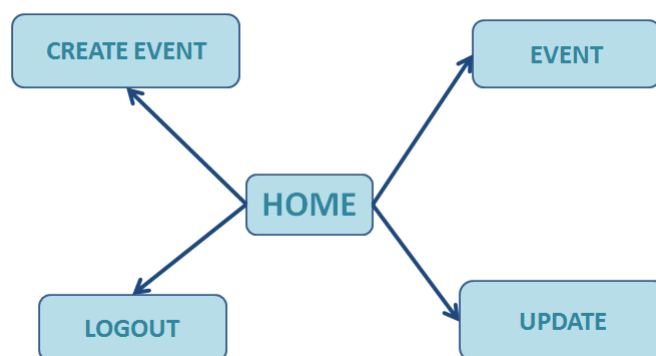


Figure 4.12: GUI model Interaction of Authorized User Home Page

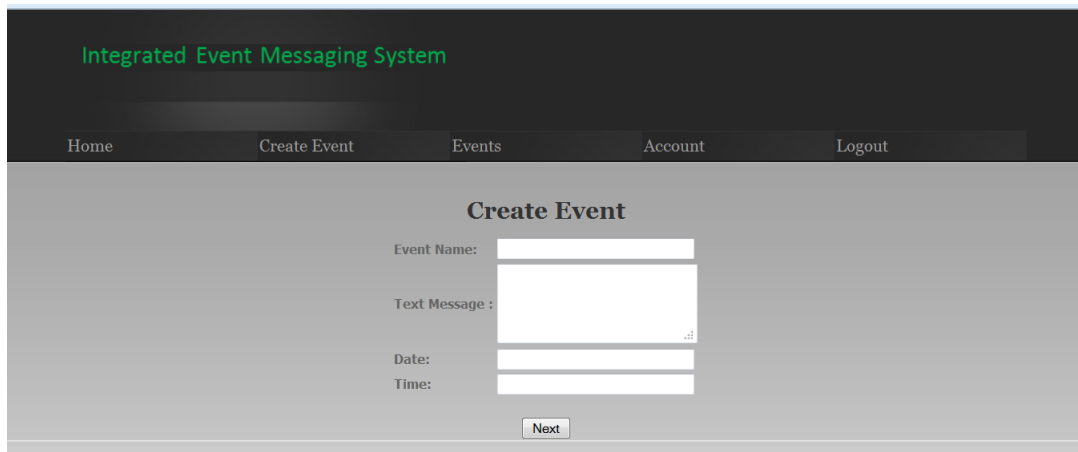
Home Page:

Home page of authorized user contains three basic pages- create event page, event page and update page. They are described in the following section.

Create Event Page:

In this page the authorized user creates event by giving event name, message, time, date and the receivers whom to send the message.

The view is depicted on figure 4.13.

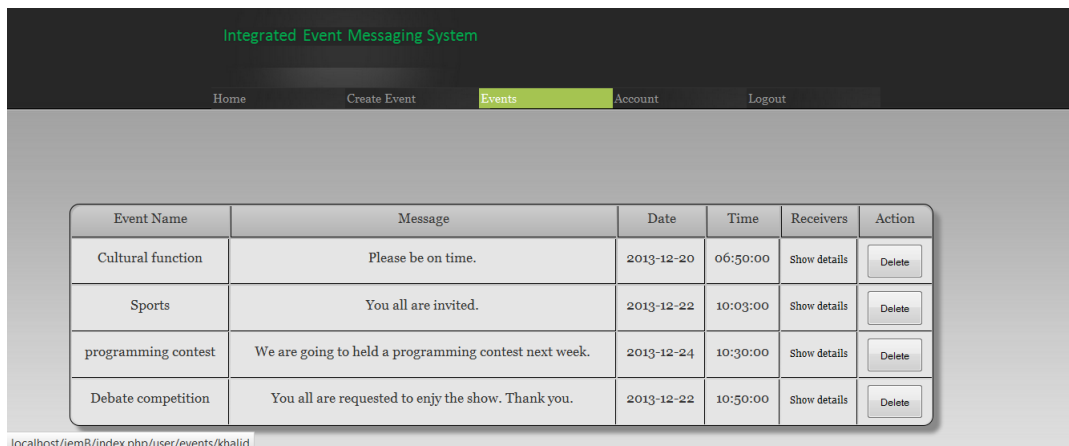


The screenshot shows a web application interface for an 'Integrated Event Messaging System'. At the top, there is a dark header with the system name in green. Below the header is a navigation menu with five items: 'Home', 'Create Event', 'Events', 'Account', and 'Logout'. The 'Create Event' page is the active page. The main content area has a light gray background and is titled 'Create Event'. It contains a form with the following fields: 'Event Name:' with a single-line text input; 'Text Message:' with a multi-line text area; 'Date:' with a date picker; and 'Time:' with a time picker. A 'Next' button is located at the bottom of the form.

Figure 4.13: Create Event Page

Events Page:

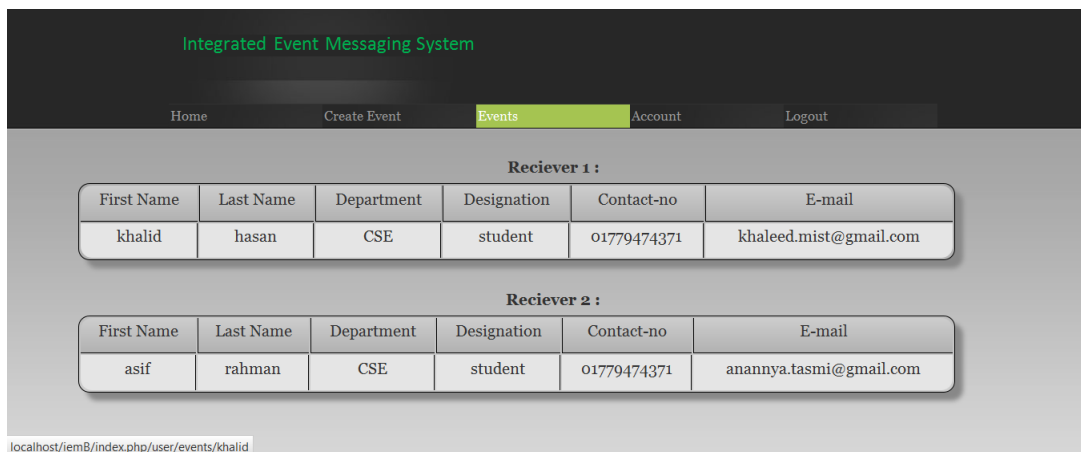
Events page contains the events created by the user. The GUI of events page is shown in figure 4.14.



Event Name	Message	Date	Time	Receivers	Action
Cultural function	Please be on time.	2013-12-20	06:50:00	Show details	Delete
Sports	You all are invited.	2013-12-22	10:03:00	Show details	Delete
programming contest	We are going to held a programming contest next week.	2013-12-24	10:30:00	Show details	Delete
Debate competition	You all are requested to enjoy the show. Thank you.	2013-12-22	10:50:00	Show details	Delete

Figure 4.14: Event Page

In this page the user can see the events name he created with the event message, time, date and receivers. If he wants the details of the receivers he needs to click the show details link of the user field.



Receiver 1 :					
First Name	Last Name	Department	Designation	Contact-no	E-mail
khalid	hasan	CSE	student	01779474371	khaleed.mist@gmail.com

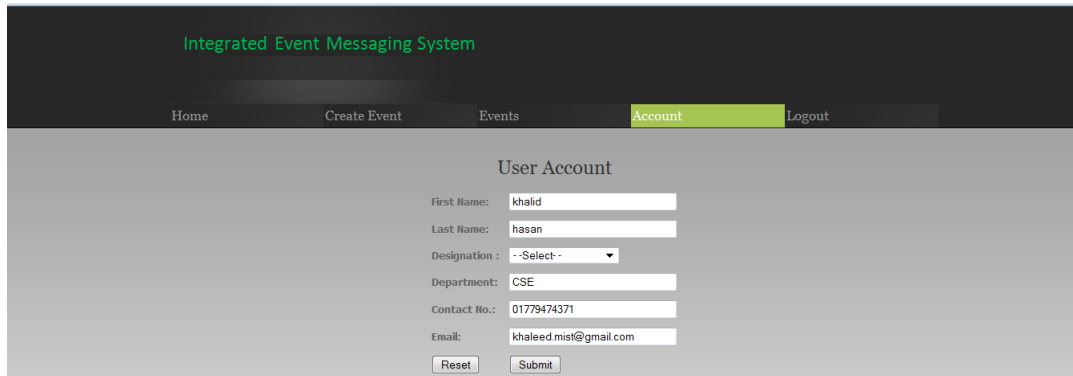
Receiver 2 :					
First Name	Last Name	Department	Designation	Contact-no	E-mail
asif	rahman	CSE	student	01779474371	anannya.tasm@gmail.com

Figure 4.15: Detail of Receivers Page

Account Page:

This page contains the personal information of the user that can be easily updated by the user.

The GUI of account page is shown in figure 4.16.



Integrated Event Messaging System

Home Create Event Events **Account** Logout

User Account

First Name: khalid

Last Name: hasan

Designation : --Select--

Department: CSE

Contact No.: 01779474371

Email: khaleed.mist@gmail.com

Reset Submit

Figure 4.16: Account Page

4.4 Summary

This chapter implies a systematic and rigorous approach to design- an approach demanded by the scale and complexity of many system problems. It fulfills user goals. We have discussed a systems approach that looks at users in relation to a context.

CHAPTER 5

IMPLEMENTATION AND TESTING OF THE SYSTEM

5.1 Introduction

The implementation phase covers whole hosting process for the website and perfect deployment of the website. In this chapter the process of implementation of web server, HTML pages, website, graphics will be resided.

5.2 Implementation of Data Model

The database schema is shown in figure 6.1.

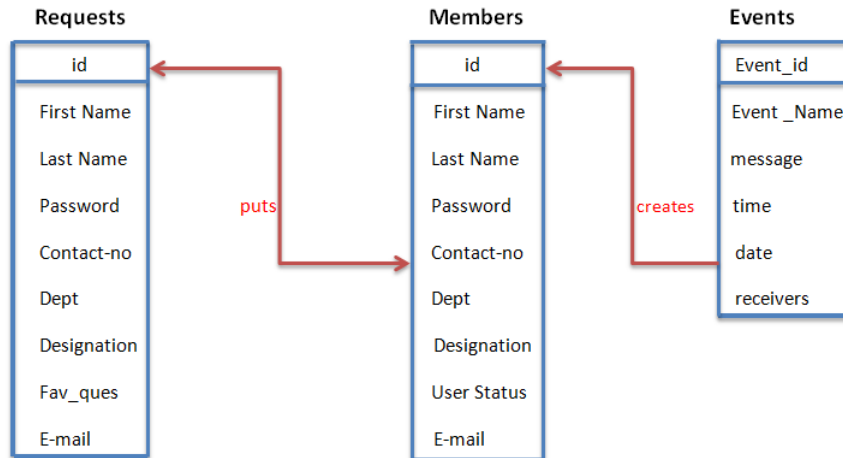


Figure 5.1: Schema Diagram

As per the schema diagram, there are three tables in our database, events, members and request table. The structure of the tables are given below.

The structure of members table is shown in Table 5.1.

Table 5.1: Table Structure of Members Table

FIELD	TYPE	SIZE	CONSTRAINTS
ID	INT	1000	PRIMARY KEY
FIRSTNAME	VARCHAR	30	
LASNAME	VARCHAR	20	
DEPARTMENT	VARCHAR	20	
DESIGNATION	VARCHAR	20	
CONTACT-NO	VARCHAR	11	
E-MAIL	VARCHAR	20	
USER STATUS	INT	1	
STATUS	INT	1	
PASSWORD	VARCHAR	32	

The structure of request table is shown in Table 5.2.

Table 5.2: Table Structure of Request Table

FIELD	TYPE	SIZE	CONSTRAINTS
ID	INT	1000	PRIMARY KEY
FIRSTNAME	VARCHAR	30	
LASNAME	VARCHAR	20	
DEPARTMENT	VARCHAR	20	
DESIGNATION	VARCHAR	20	
CONTACT-NO	VARCHAR	11	
E-MAIL	VARCHAR	20	
FAVORITE QUESTION	VARCHAR	30	
PASSWORD	VARCHAR	32	

The structure of event table is shown in Table 5.3.

Table 5.3: Table Structure of Event Table

FIELD	TYPE	SIZE	CONSTRAINTS
EVENT ID	INT	1000	PRIMARY KEY
EVENT NAME	VARCHAR	30	
MESSAGE	VARCHAR	200	
TIME	TIME		
DATE	DATE		
RECEIVERS	VARCHAR	200	
CREATOR	VARCHAR	30	

5.3 Implementation of GUI

GUI (graphical user interface sometimes pronounced 'goeey') is a type of user interface that allows users to interact with electronic devices through graphical icons and visual indicators such a secondary notation, as opposed to text-based interfaces, typed command labels or text navigation. The actions in GUI are usually performed through direct manipulation of the graphical elements.

Before designing GUI our first look was that what actually the users need. Then we pay attention to the patterns. First we defined the data needed to build a complete GUI Then we stored it in an environment for easy access by the GUI component. After that, we wrote a wrapper to get the data from raw files and populate the environment. We chose a suitable template. By following that template we began to implement our GUI. Finally, we created the GUI.

We selected a MVC framework (CodeIgniter) to implement our user interface. We faced some problems at the beginning. We had to change the data model which is related to GUI according to the users need.

5.4 Testing of The System

5.4.1 Unit Testing

Unit Testing is a level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of software. It usually has one or a few inputs and usually a single output. In procedural programming a unit may be an individual program, function, procedure, etc. In object-oriented programming, the smallest unit is a method, which may belong to a base/super class, abstract class or derived/child class. (Some treat a module of an application as a unit. This is to be discouraged as there will probably be many individual units within that module.)

We studied the implementation code of the certain field on our web page, determines all legal (valid and invalid) AND illegal inputs and verifies the outputs against the expected outcomes, which was also determined by studying the implementation code.

We have done unit testing for every Use Case of Our project.

General User Use Case:

The use case of general user is tested and given below.

Sign Up Use Case

Mass people can send a request to the administrator for being a user of the system. For Sign up use case of general user, we tested whether the general user are able to send sign up successfully or not. The user will fill up the form and admin will be sent a notification. When admin will accept the request general user will become an authorized user.

To send the request the general user needs to fill up a registration form. If he submits the form without giving first name, last name, contact-no, e-mail and password he form will not be submitted. Again if anyone gives wrong email address as input it will not take it and will require valid email address.

Administrator Use Case:

The testing of the use cases of administrator is given below.

Approve User Use Case

Administrator will approve or reject the requests coming from general users. When administrator approves or rejects a mail is sent to the user. If the mail is not sent then the request will not be deleted. The request will remain valid until a mail is sent.

Block User Use Case

Administrator has the power to block any user. The testing shows that when a user is blocked his details are removed from current user list to blocked user list. The testing also shows the blocked user also can not log in to the system.

Delete User Use Case

Administrator has the power to delete any user. The testing shows that when a user is deleted his details are removed from current user list to previous user list.

Maintain List Use Case

Administrator has the authorization to insert the members of the organization. To insert any member a form is given. If the form is submitted without giving the name, designation, department, contact-no and correct mail id then it is not submitted.

Authorized User Use Case:

The testing of the use cases of authorized user is given below.

Create Event Use Case

The authorized user can create events as their needs. Users can send SMS and mail through the event to their clients.

We will check that if one of the event name, message, date or time is not provided, message will appear to ask the user to provide it.

Time and Date should also be consistent. Suppose if any one place previous date and time in place of current date and time message will not be sent and it required the valid time and date. If none of the user is selected a message will appear to select the user.

Update Information Use Case

The information is updated successfully if the user press the update button. And also if he user press the reset button he information is reset.

Check Previous Events Use Case

When an authorized user wants to see the events created by him they are successfully presented before him. He can also check the details of the user who receives the SMS and mail.

Delete Events Use Case

The authorized user can delete any event created by him and the events are deleted successfully.

5.4.2 System Testing

System testing is the testing of behavior of a complete and fully integrated software product based on the software requirements specification (SRS) document. In main focus of this testing is to evaluate Business / Functional / End-user requirements.

This is black box type of testing where external working of the software is evaluated with the help of requirement documents it is totally based on Users point of view. For this type of testing do not required knowledge of internal design or structure or code. This is the first time end to end testing of application on the complete and fully integrated software product before it is launch to the market.

We will check the total system after completing our project. We have checked the total web application system. We have checked signup,login ,users authentication, user interactions, creating events etc at a time. We have to check the SMS sending system that is it will work or not. Thus the system testing is completed.

5.5 Summary

The codes are reviewed, whenever they are produced and each part of the whole project was tested in local and further server. Necessary tests were carried out to ensure the systems of the web site are error free and all operating process work per requirement. Problem of illogical data, unclear eld, inconsistent movement and performance were detected, tackled and eliminated through different tests.

CHAPTER 6

CONCLUSION AND FUTURE WORK

6.1 Discussion and Conclusion

Most of the time many institute, organization requires to send same message to a group of people in order to inform them about some events or important information. It becomes very difficult for a person to send same message to a group of people manually. It becomes a huge problem if any of the receiver miss the important message, so the person who sends the messages needs to be very careful. So we developed a system which can do this job instead of us, and neither any organization will need to worry about to inform any event to their clients nor any institutes. This system will send messages automatically to a number of people which is very difficult to do manually.

We have used MVC framework (CodeIgniter) for our project. First we have faced problems as we had not use framework ever before. So, through our project we learn about the MVC framework, how this can be used for web development efficiently. Another challenge was that sending sms to different users by creating event. We have applied some different methods for sending SMS by creating event. Some of them did not work. So, it was a great challenge for us.

Finally we have found SMS4BD gateway which provided by a company named progga-soft. This organization use distributed cloud server by Amazon Web Services, the world renowned cloud service. We have integrated our Web Application with this SMS4BD gateway. After that we have reached to our desired goal.

We think that Integrated Event Messaging System is a classic web application for this generation. It will play an important in the communication of the various institutions or organization for their various purposes. Any important person may also get benefit by using this application. So, we can say that Integrated Event Messaging System will be helpful for betterment of the institutions or organizations.

6.2 Future Scope

First we have to see how people or organization are getting benefit. We may have to bring some changes according to their needs. We will study how this system can be more developed so that we can modify our project. In short, It is planned to keep managing the project and improving it based on user feedback. In future we will develop project into Android application. We hope, in future Integrated Event Messaging System will serve as a great solution of messaging system of different kinds of organizations or institutions which will become more eligible for users.

It is planned to improve the website with many other functions like the delivery status of the message and the blocked user will be able to send requests to the administrator to unblock him. We also planned to improve the system with a mobile application.

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