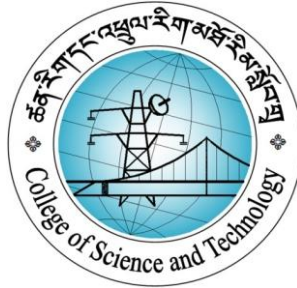# COLLEGE EVENT MANAGEMENT SYSTEM

Project Report
submitted in partial fulfilment of the requirements for the award
of the degree Bachelor of Engineering
in
Information Technology

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ROYAL UNIVERSITY OF BHUTAN
COLLEGE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY

CERTIFICATE

This is to certify that the B.E. project titled **"College Event Management System",** which is being submitted by **Samuel Pradhan (EIT2011023), Karma Choden Wangmo (EIT2012008), Dorji Khandu (EIT2012005) and Phurpa Wangdi (EIT2012022)** in partial fulfillment of the requirement for the award of the degree of Bachelor of Engineering in Information Technology is a record of students work carried out at College of Science and Technology, Phuentsholing under my supervision and guidance.

Mr. Tsheten Dorji

Project Guide

ACKNOWLEDGMENT

We would like to acknowledge mentioned hereafter for making project a successful one without which it wasn't be possible with them.

Our sincere and heartfelt gratitude to our project guide, Mr. Tsheten Dorji (DRIL) for constantly giving us time for discussion of project with timely feedback and suggestions and also for being very supportive with our project till end.

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Lastly to our ICT officer for providing informative suggestion for our project and others class students in helping us by providing comments and suggestions.

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ABSTRACT

College Event Management System (CEMS) is online web based application developed to manage various events taking place in college. The system provide easy management of events provided with functionality in scheduling the events, handling clashes and providing events detail required for the events to take place.

The system is developed with Laravel framework that provide ease of usability and development of overall project with required functionality. This application overcomes the problem of manual events taking place that lacks timely information, clashes occurring constantly and do away paper based work. Moreover, the application serve as medium for student and staff daily schedule and can be managed easily.

TERMINOLOGY

Event: It is something that occurs in a certain place during a particular interval of time

Database: It is a collection of related data

Relational Database Management System (RDBMS): It is database management system (DBMS) based on relational model.

Entities: It is a thing or object of importance about which data must be captured.

Entity Type: group of entities which have the same basic attributes

Attributes: It is a property used to describe an entity

Cardinality ratio: specifies number of relationship instances that an entity may participate in.

Table: It is a set of data elements using a model of vertical column and horizontal rows.

Relations schema: a set of attributes

Primary key: it is a key in a relational database that is unique for each record.

PHPUnit: it is a unit testing framework in laravel that uses assertions to verify that code under test behaves as expected

LIST OF ABBREVIATIONS

Sl. No.	Terms	Descriptions
1	CEMS	College Event Management System
2	PBE	Programmed Board
3	PHP	Hypertext Preprocessor
5	RDBMS	Relational Database Management System
6	TB	Tera Byte
7	GPL	General Public License
8	PERL	Practical Extraction and Report Language
9	WAMP	Windows, Apache, MySQL and PHP
10	OS	Operating Server
11	HDD	Hard Disk Drive
12	J2EE	Java Platform Enterprise Edition
13	XML	Extensible Markup Language
14	ICT	Information and Communication Technology
15	ER	Entity Relationship
16	UML	Unified Modeling Language
17	SQL	Structures Query Language
18	DRIL	Dean Research and Industrial Linkages
19	AJAX	Asynchronous JavaScript And Xml
20	RTL	Right To Left
21	SUT	System Under test

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1 CHAPTER ONE: INTRODUCTION

1.1 Background

Events are triggered to bring certain agenda to be discussed and to meet certain criteria for broader purposes and fulfilment of events scope by event management, describe the management of certain events by managing, creating and directing all kinds of events.

In our college, various events like staff meetings, workshops, and seminar and student meetings are held and often with busy schedule of respective members, problems are faced with respect to their timetable conflicts, clashes between members, tight timetable schedule and in order to handle this problems, college event management system will aim to provide the solution to its best.

College Event Management System is a web application system that manages various events taking place in colleges either with respect to staff and the student. It provides various basic functionalities in managing the events held by deploying the membership information of respective department. The ease in employing services with CEMS will provide benefits in efficient event management.

With college event management system web-based application, the various events held will connect overall colleges' activities, event organizer can approve the details of members responsible for particular meeting. Moreover if clashes are met, system are designed for automatic rescheduling of events, notifies new schedule.

1.2 Motivation

The event's member secretary always take initiative in organizing various events especially as of with staff meetings that is frequently happening. Respective head of department struggle in planning the work plan from beginning of year and it is quite challenging indeed to do all work on paper and maintain all those records.

There was issue related with certain events like meetings where respective attenders have to attend various meetings and are meet with clashes. One or more staff members have to attend several meetings and at the same time, they end up missing the event attendance.

The event member secretary are faced with several issue with planning, maintaining and informing members even though there exist current system in virtual learning environment and webmail which is often being left unnoticed. However as of those who are well informed, due to clashes with schedule, or provided with right information, fails to act accordingly.

From overall observation to current management of events especially meetings which is often done, there is need of relating right information and culmination of effective meetings.

1.3 Objectives

Our project will focus on developing web based application of event management system mainly targeting to considering the development of staff meeting management and student meeting management.

This two module will describe our overall project objectives with a need of specifying certain constraint related to management and organization of events. Our main goal define is to priorities, meetings out of series of events taking place. Staff meeting is kept prior and then followed by student meeting management.

The basic objective defined for our project is based on providing user-friendly web based interface for staffs and students where they can access all detailed information they needed. Then focuses will be done by listing series of events schedule for various purposes like PBE meeting, talk show, guest lecture, and workshop and student meetings like councilor meeting, hostel meetings that involves important role of particular person.

If everything in place, there is need for standard mechanism to handle proper implementations and our objective will be developing proper web based application to bring up user friendly environment

1.4 Scope

The scope defined in our project are as follows:

a) Event Categorization

This application will categorize events such as academic meetings, student meetings, workshops, talks, adhoc meetings etc and based on their importance and member participants the system will prioritize for easy scheduling of meetings.

b) Scheduling Events

The application will help in scheduling events in its most convenient style. The member secretary can schedule the events if held responsible to avail the events details to user. If clashes are met when scheduling the events, then system can be able manage the clashes

c) Room allocation for various events

Venue will be allocated for various meetings based on the availability of rooms. When scheduling the events, respective rooms are allocated and if particular room is booked, then the system handles this clashes.

d) Meeting Information Management

The application will keep records of a particular meetings starting from its member information to what are the agendas discussed and the minutes and outcomes of the meetings. The information that is done on paper can be access via online because all the required information are kept since the required file is made upload-able or downloadable.

e) User management

User management will help in determining who can actually schedule the events. The guest user can only view the events on system whereas the privileges to schedule the events is based on member secretary only. For the particular event, member secretary can avail the services required in event management or there will be different member secretary for any number of events that need to be scheduled since member secretary needs to register in the system.

f) Notification of Events

The scheduled events will be notified via email to concerned persons so that respective members or participants will know the events details.

Following are the two out-of-scope that are being reflected as a part of our project:

a) Course Timetabling and Management

This includes various departmental course in college where there will be management of various course like Architecture, Civil, Electrical, Electronic and Communication and Information Technology so that there would be concrete information and management among courses.

b) Examination Timetabling and Management

This includes examination timetabling where system will manage scheduled exam timetable rather than sending to respective mail. This module will provide platform to users to view and management examination timetable.

2 CHAPTER TWO: SYSTEM REQUIREMENTS

This chapter discusses on the theoretical background of the software such as local server and test editor used in system development. The following are some of the software and hardware specification we used for development of College Event Management System

2.1 Software Requirements

2.1.1 PHP Framework-Laravel

Laravel framework is free, open source PHP web application framework that's equipped features including restful routing that manages all the client/server routes easily and connects resources smoothly. It offers web application with reliable and well-tested code. Moreover it includes a powerful queue library and simple authentication.

Other features is a lightweight Blade Templating Engine that is powerfully driven by template inheritance of files having blade.php extension and of composer that is an amazing tool that manage application's third party packages easily. Laravel framework has built-in unit testing and simply readable impressive syntax where larger Community caters to thousands of programming geeks and application developers. It is intelligently designed to offer incredible flexibility to developers that help them create each and everything from small sites to giant enterprise applications (Solution, 2015).

2.1.2 MySQL

MySQL is a fast, easy-to-use relational database Management system (RDBMS) being used for many small and big businesses. MySQL is developed, marketed, and supported by MySQL AB, which is a Swedish company.

 MySQL is popular because it (M, 2015)

- Is released under an open-source license. So we have nothing to pay to use it.

- Is a very powerful program in its own right and handles a large subset of the functionality of the most expensive and powerful database packages.

- Uses a standard form of the well-known SQL data language.

- Works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.

- Works very quickly and works well even with large data sets.

- Is very friendly to PHP, the most appreciated language for web development.

- Supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but we can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).

- Is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

2.1.3   WAMP Server

Wamp Server or Windows Apache MySQL PHP is a virtual server for the Windows platform. It allows it user to manage Website and all its components (PILLOU, 2015).

a) Creating:

Wamp Server is able to create MySQL database and execute SQL statements. In this way, text size can also be customized as well as its display. It has a previewing option to check the changes in real time.

 b) All-in-one tool:

It deals with 3 different website formats which are Mysql, PHP and Apache. This is helpful because the user does not need to install any other application to manage these files.

c) Easy access:

It does not possess any graphical interface. It is only represented by a tray icon that can be accessed on the lower right side of the screen.

d) Offline mode:

 The user is able to work in offline mode. For that, he has to load the web pages and turn off the application.

e) Configuration:

User can adjust his server configuration. All the settings can be accessed by clicking on the left mouse button. From there, he can check logs and the current project.

2.1.4   Sublime Text Editor

It is a versatile and fun text editor for code and prose that automates repetitive tasks so we can focus the important stuff. It works on OS Windows and Linux. In our project we have used sublime editor 2 which is not open source

The features of Sublime Text:

- "Goto Anything", quick navigation to files, symbols or lines

- "Command palette" uses adaptive matching for quick keyboard invocation of arbitrary commands

- Project-specific preferences
- Simultaneous editing: simultaneously make the same interactive changes to multiple selected areas

2.1.5   Collaborative Tools - GitHub

GitHub is a web-based Git repository hosting service. It offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features. Unlike Git, which is strictly a command-line tool, GitHub provides a Web-based graphical interface and desktop as well as mobile integration. It also provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project (Williams, 9 July 2012).

For this project, GitHub is used for code sharing and do documentation among team members. The source code of this project is available in GitHub and can be accessed through this link: *https://github.com/samuelstrike/College-Event-Management*

2.2 Hardware Requirements
The hardware requirement are:

- ✓   RAM: 512 MB

- ✓ Processor: Intel or compatible 1 GHz or higher.

- ✓ HDD Space: 2 GB or more

- ✓ Monitor: 800*600 or higher required.

2.3 System Architecture

CEMS implements three tier system architecture. Three tier architecture is a client server architecture in which functional process logic, data access, data storage and user interface are developed and maintained as independent modules on separate platforms (Janssen, 2010).

Three -tiered architecture consist of presentation/client tier, application tier and data tier and on the front line of a typical Web site is the Web server that acts as the presentation layer.

This tier has three functionalities (X, n.d)

Application server receives requests from Web server, looks up information in database (3rd tier) and processes the information. The processed information is then passed back to the Web 12 server where it is formatted to be displayed on clients' machines. Typical application server includes Apache.

Database server is the storehouse of a Web site's information. Everything from user accounts and catalogues to reports and customer orders is stored in database.
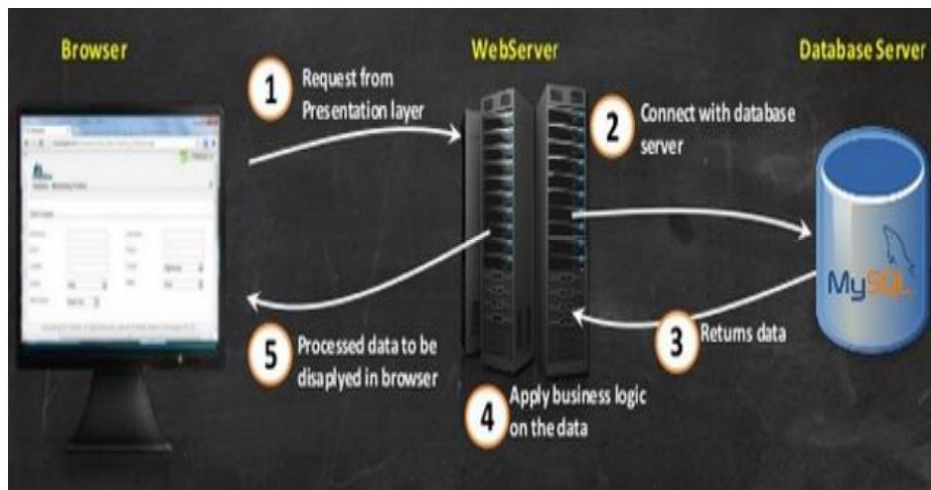

Figure 1: 3-Tier Client Architecture *(Baatra, March 26,2014)*

3 CHAPTER THREE: METHODOLOGY

Our project methodology consist of literature review which basically consist of model of existing system and programming platform. Next phase is requirement gathering and analysis which include data and functional requirements. Under data requirement which is also known by database design includes relational, conceptual and physical database design. The functional requirement includes application program design and user interface design.

For the next phase, from data requirement, we have implementation phase and from functional requirement we have coding phase. After coding and implementation phase we have testing which can be categories under unit and system testing. Then the system is deployed in deployment phase and lastly documents are provided both for user and technical to have a complete system application.
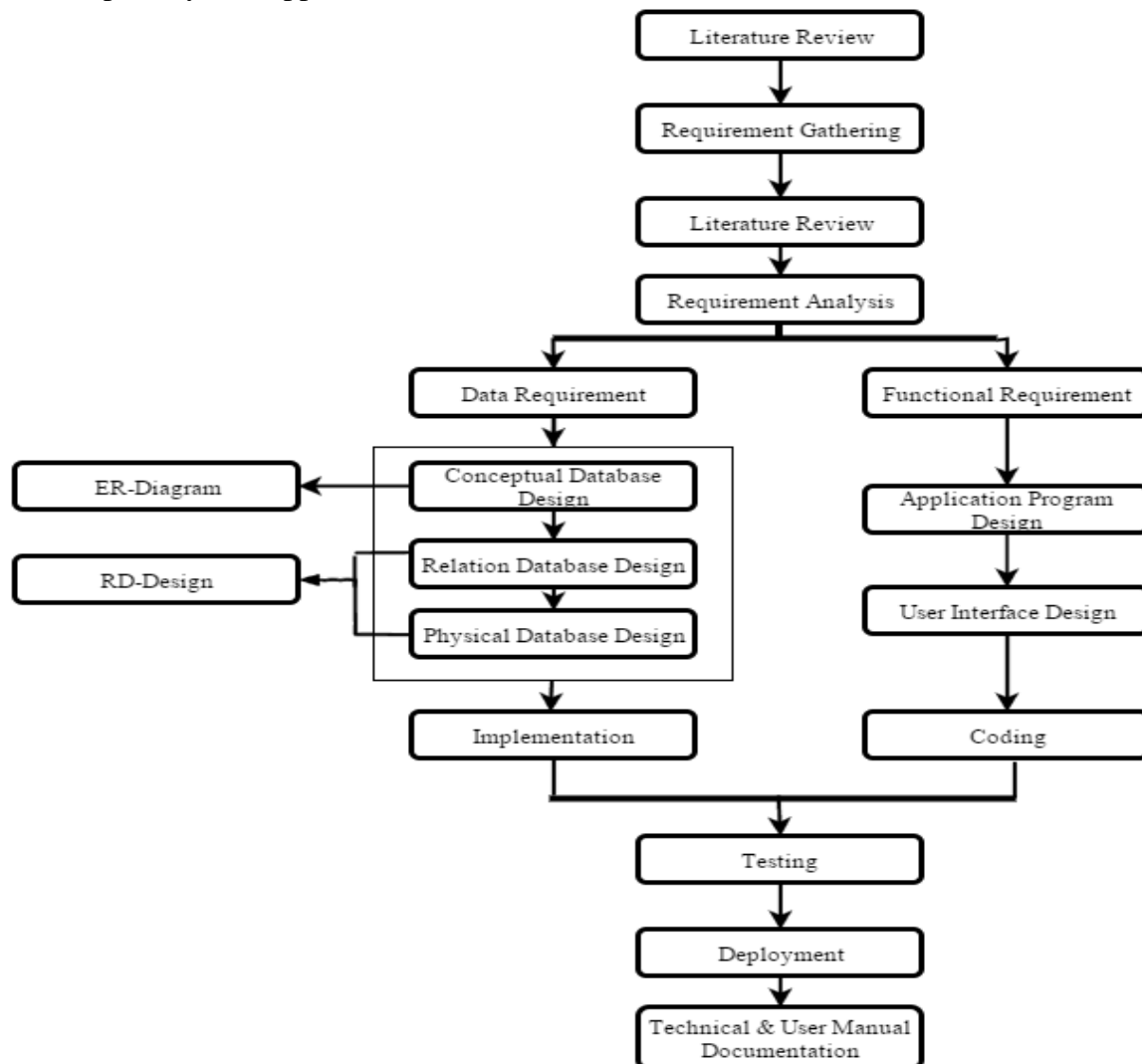

Figure 2: Methodology

3.1 Literature Review

3.1.1   University Timetabling

Event management system has become an essential requirement in the universities like our college in order to enhance the manner of managing a particular event. It is due to the difficulties certain personnel face in effective management of various events including meetings, seminars presentations, etc. that makes event management so essential. For instance, in handling a program committee meeting the chair person has to manually schedule the meeting on the right time at which every member participants or at least two third of the member participants must be available for the meeting to be held. Otherwise rescheduling the meeting manually is a real challenge to the chair person. For this reason, an efficient event management system can help in managing such tasks effectively without taking much time.

There are many such systems developed in various organizations and are fully functional. One of such systems which is relevant to our study include the Unitime University timetabling system which is implemented at Purdue University. The complete system included course timetabling, examination timetabling, event management and student sectioning (Muller T, 2010)

 However, our study mainly focuses on how the event management is carried out in this system. Unitime has a completely web-based interactive system which is developed using the Enterprise Edition of Java (J2EE). They have used an SQL-based relational database model and an XML interface to interact with the other systems used by the University. In this system, any user who are registered to the system can schedule any event at an appropriate time and place. There are 5 certain flow of stages in the scheduling of a particular events where one has to relate it from checking the room availability to checking the availability of the member participants.

3.1.2 *Google Calendar*

Google Calendar is a very useful app. User can create multiple calendars and share them with other people. The following are five great features in Google Calendar: easy scheduling, integration with email, sharing calendars, mobile device access, and publishing calendars (Alghini, December 10,2013)

a) **Easy Scheduling**

User can easily schedule events and meetings by simply clicking on a day in the calendar. Users can specify who can attend the meetings or events. There is a search feature so that user can easily find the scheduled events. The user can also set up an event by typing in the text of the event and specifying the date. The calendar is flexible and easily managed. The Google Calendar can keep track of user's life important events or help users to manage their various projects

b) **Integration with Email**

Google Calendar is integrated with email. When user create events and select participants, the application sends an email invitation to them. Reminders of events and dates can be configured to notify users by email.

c) **Sharing calendars**

Calendars in Google Calendar can be shared with one or more persons that you specify. User can share with anyone that has a Google account or an email address with any other provider. User can set the security settings for the individual calendar allowing access to the public or certain individuals. User can share calendar by selecting this next to the calendar's name. There is a place to edit user permissions within Google Calendar's sharing settings. This ability to share calendars is a way for people to communicate when they are free to schedule meetings and milestones.

d) Mobile device access

Google Calendar can be used with a variety of mobile devices, including I phones, Nokia S60, Blackberry, Android and Windows based phones. The feature that accomplishes the syncing of data is called Google Sync. This feature is easy to set up and configure. Each type of phone has slightly different instructions to set this up. The instructions are easy to find on the Google website. Most problems with syncing the calendar with the Google website are temporary.

e) Publish Calendars

Users can publish their calendar on their website. Google creates the website embedded code automatically. Users just need to access their site's files or the dashboard of their blogging platform. Users can adjust the size, color, and other parameters to match the available space on their page. Users can alter calendar settings so that the public can see events. This will depend on your goal for the calendar. Google Calendar is a great app in Google business apps. It can be used to keep many people informed of events, meetings, and milestones. The events can be easily added and the application will notify the people you want to have attend. Entire calendars can be shared easily. This allows everyone to be on the same page and keep current with a project. The ability to have email reminders can be very useful. The mobile device capability is also a great feature. Most people have a mobile device and can benefit from this. Google business apps is a great collection of useful applications.

3.1.3 Full Calendar
Full calendar is a drag-n-drop jQuery plugin for displaying events on a full-sized calendar. Following are the features of full calendar (Kreynen, 2011):

- ✓ Drag-and-drop features
    - Possible to drag, drop and resize events in the calendar itself
- ✓ Color box-open events in a light box
    - Full calendar has built in support for the color box module.
- ✓ Google calendar support
    - Starting with version 2 Full calendar can handle google calendars.
- ✓ Event coloring
    - With Full calendar it is possible to color your events
- ✓ RTL support

- This module has built in RTL support which can be done by changing the order of the buttons.

✓ AJAX support

- If calendar gets a bit slow because it has to load too many events, then we can enable the Ajax setting in the views UI

3.1.4   Virtual learning environment

Virtual learning environment (VLE) in college has list of events or can view the events. The certain features integrated in VLE are as follows:

➢ Easy to view upcoming events

➢ Allocation of venue

➢ Gives information about attendee

Besides the features available, VLE has short comings like it is not able to describe agenda, meeting and member clashes not taken into consideration and no notification of events through email unlike Google calendar.

3.2 Requirement Gathering and Analysis

The literature review presented above mainly give us information and various ideas to further come up with good system. Based on review, we found out what should be implemented and what does our system should handle to provide better services to user. Below are the few requirements gathered and analyzed for development of our system:

1) Materials and information gathered from our DRIL

   Since our system focus on event management in colleges, we felt a need to ask for suggestions and required information from DRIL Mr.Tsheten Dorji. Under his guidance we could fetch several necessary information for our college event.

2) Brainstorming session by project guide and the project members

   With the help of project guide and own team members, requirements are being collected and brainstormed as of how our project should be, what things are required for complete development of system to meet the scope and objectives.

3) Interview with ICT officer

The requirements were also gathered and analyzed with the help of ICT officer looking at existing system shortcomings and how our system should handle the shortcomings

4) Feedback and suggestion from project reviewers and friends

The timely project presentation in front of project reviewers and friends gave us what requirement our project needs via feedbacks and suggestions.

After the requirement gathering and analysis phase produce both data and functional requirements. The data requirements are used as source of database design and the requirements should be specified in as detailed and complete form as possible. Then the functional requirement consist of user-defined operations applied to database (retrievals and update) and is used as source of application software design.

The data requirements of College Event Management System (CEMS) are broadly categorized under three module as follows:

a) **Event schedule module**

In this module consist of data requirements of member secretary who is responsible for the scheduling the various events and includes member secretary details like his/her *id, name, department, email* and *registration_id*. With this member secretary information can schedule respective events and event provides information such as *event_id, event title*, *start_time, end_time, agenda and venue* so using this data member secretary can schedule events when necessary.

b) **Event view module**

In this module, the requirements of data mainly focused as to who can view the event or how the events can be viewed. Data includes events information such as *event_id, event_title, start_time, end_time, venue and agenda*. Members with details *member_id, name, email, department* and guest can view the event details.

c) **Event member management**

In this module consist of data requirements of member secretary who is responsible for the creation or adding members of event and includes member secretary details like his/her *id,*

name, department, email and *registration_id*. Member secretary can create respective event members required and event member has information such as *member_id, name*, *email, and department,* so with following data of members, member secretary can create or add events as many member required.

The functional requirements of three module as follows:

- The system should accept the event name and list the member participants of an event to be scheduled.
- The system must display a calendar to fix a date of a particular event
- The system should be able to display the number of available venue for event scheduling on a particular date
- The system must provide functionality to manage the clashes between two different events. Clashes include event clash, venue, member, time clashes.
- The system must have a login interface(for security reason) in order to view or create an event
- It must have functionality to upload and download file and images of particular event
- It should provide an option for cancelling an event
- Whenever an event is scheduled, the system should automatically notify the member participants about that event through email

3.3 Database Design
3.3.1 Conceptual Database Design
After the requirements, the design starts with creating conceptual schema for the database using high level conceptual data model and this phase is called conceptual database design.

In this phase, we have Entity-Relationship(ER) diagram or UML class diagram and we have used ER diagram which describes high level data model of the specific application area. It describes how different entities (object, items) are related to each other and what attributes (features) each entity has. It includes definition of all the concepts (entities, attributes) of the application area.

The following is overall CEMS ER diagram

The Entity *member_secretary* relates to entity *events* with relationship as schedule. It has cardinality ratio one-to-many (1: M) where *member_secretary* can schedules as many as he/she wants. The Entity *member_secretary* relates to members with relationship as creates. It has cardinality ratio of many-to-many (M: N) where any member_secretary can creates as many members he/she wants to create. The Entity *members* relates to entity *events* with relationship as attends. It has cardinality ratio of many-to-one (M: 1) where any number of member can attends the one events. The entity *events* relates to Entity *guest* with relationship as views. The cardinality ratio is of one-to-many (1: N) where only one event can be viewed by any number of guest.
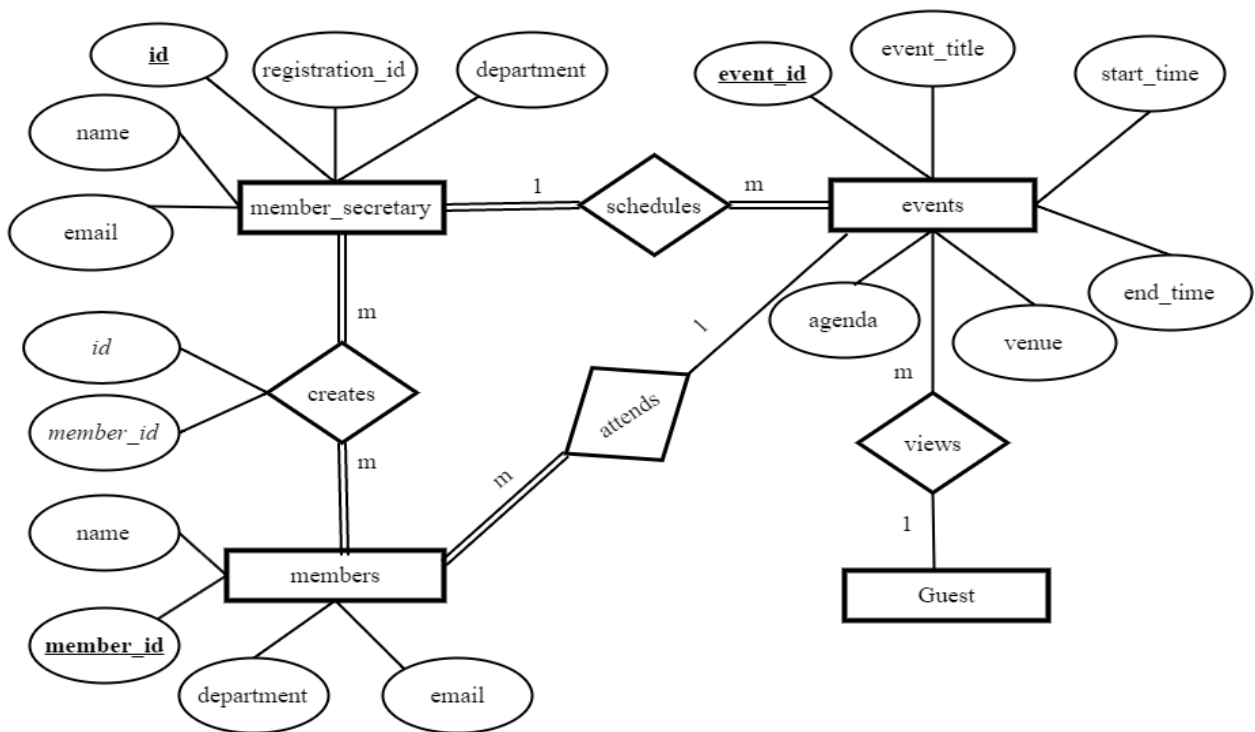
Figure 3: Overall CEMS ER Diagram

So the Entity types, attributes and relationship between entity types of each module are as follows.

In this module, entity *member_secretary* has attributes *id, department, registration_id, name, and email* with *id* as primary key. The entity *events* has attributes *event_id, event_title, start_time, end_time, venue* and *agenda* with *event_id* as primary key. The entity

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member_secretary relates to entity *events* with relationship schedules and has cardinality ratio 1: M (one-to-many) where member secretary can schedule any number of events.
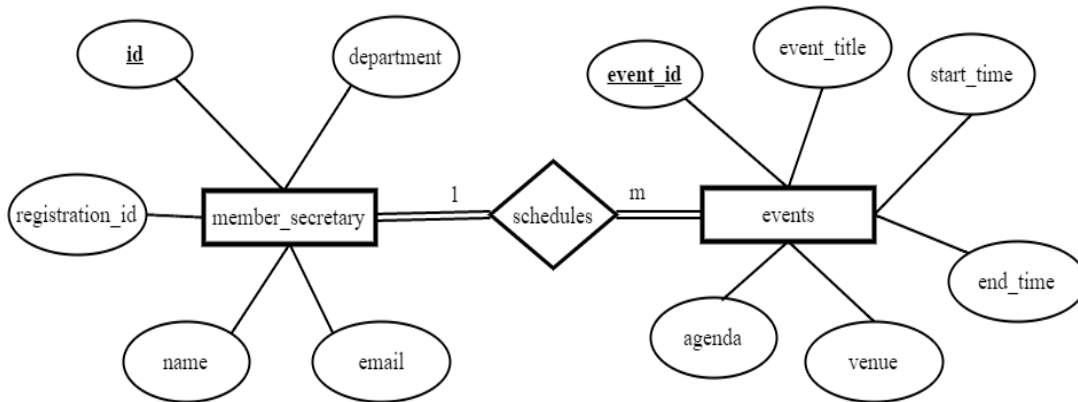
Figure 4: ER diagram for event schedule module

In this event member management module, entity *member_secretary* has attributes *id,registration_id,department,name,email* with *id* as primary key and entity members has attributes *member_id, name,department, email* with *member_id* as primary key. The member_secretary relates to members with relationship with creates and has cardinality ratio of M: N (Many-to-many) where any member_secretary can creates as many members as she/he wants.
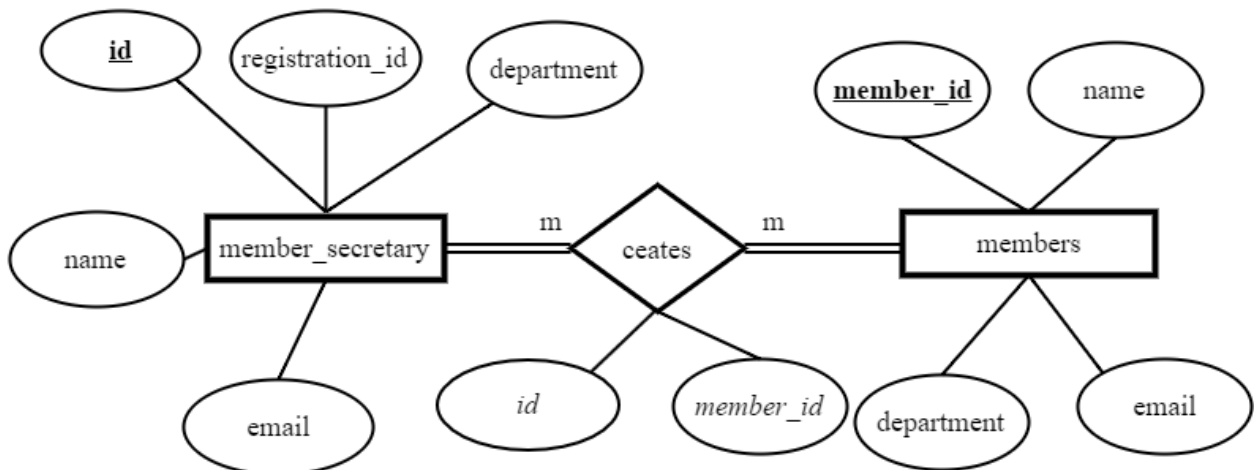
Figure 5: ER diagram for event member management.

In this event view module, entity *members* has attributes *member_id, department, name, email* with *event_id* as primary key and entity *events* has attributes *event_id, event_title,start_time, end_time,venue and agenda* with *event_id* as primary key. The events relates to members and guest with relationship views and has cardinality ratio of 1: M (Many-to-many) for both events and members and guest where members and guest can view many events as they want.
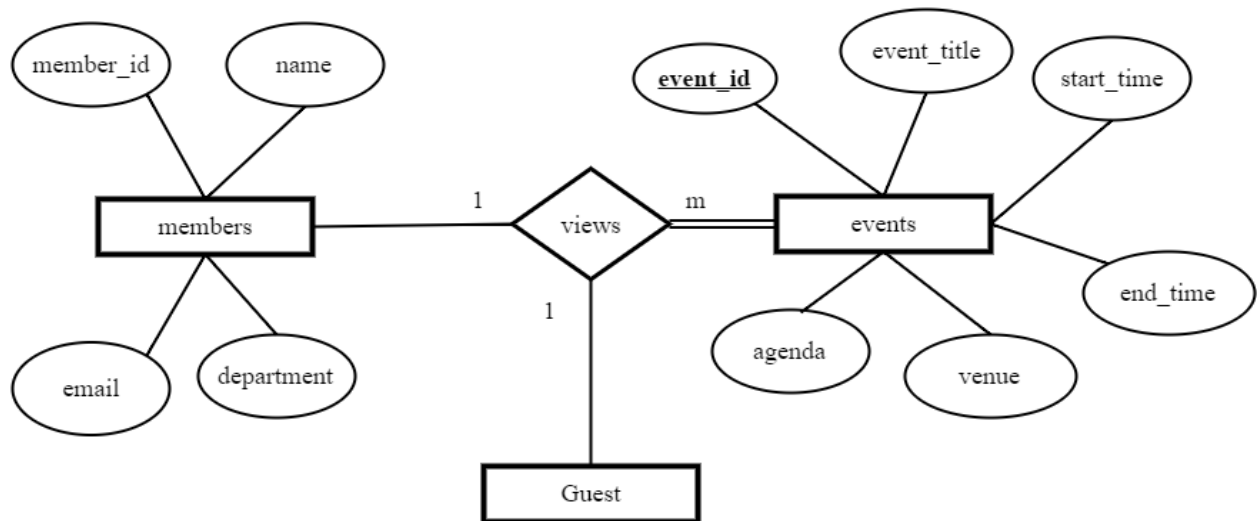
Figure 6: ER diagram for event view module

3.3.2   *Relational Database Design*

Relational model describes basic modeling concepts for schema specification where relational schema (tables and constraints) is the name (attributes) graphically drawn as table. Relation Database design is done by mapping ER diagrams to relational model.

ER to Relational Mapping algorithms is an algorithm used to convert entity relationship design to a relational database schema which follows step given below:

Entity conversion (Saini, 2013)

Step 1: Mapping of Regular entity conversion

Weak Entity conversion

Step 2: Mapping of Weak Entity types

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Relationship Conversion

Binary Relationship Conversion

Step 3: Mapping of 1:1 Relationship types

Step 4: Mapping of 1: Many (1: N) Relational types

Step 5: Mapping of Many: Many (M: N) Binary relationship types

Attributes conversion

Step 6: Mapping of Multivalued attributes

Mapping of regular entity type

For regular entity type E in ER schema, create a relation R that includes all the simple attributes
and components attributes of composite attributes. Select primary key

Mapping of 1: N relationship types

For each regular binary 1: N relationship type R, identify the relation S that represent the
participating entity type at the N-side of the relationship type. Include as foreign key in S the
primary key of the relation T that represents the other entity type participating in R. include
any simple attribute of the 1: N relation type as attributes of S

Mapping of M: N binary relationship types:

For each regular binary M: N relationship type R, create a new relation S to represent R.
Include as foreign key attributes in S the primary keys of the relations that represent the
participating entity types; their combination will form the primary key of S. also include any
simple attributes of the M: N relationship type (simple components of composite attributes) as
attributes of S.

member_secretary

id	registration_id	name	email	department

create

id	member_id

members

member_id	name	email	department

events

id	event_id	event_title	start_time	end_time	agenda	venue
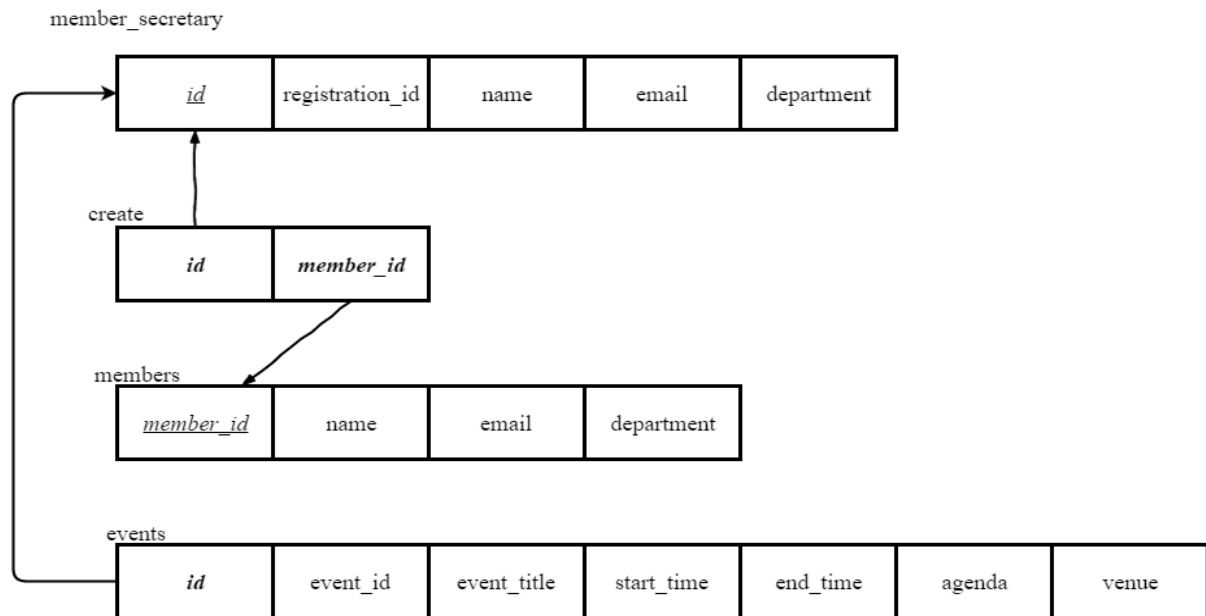
Figure 7: Overall relational database design for CMES system

In this relational database design, various ER to relational mapping are used like regular entity type, one-to-many relational mapping and many-to-many relational mapping. For member_secretary entity, id is primary key and entity members has primary key as member_id.

3.3.3 Physical Database Design

Physical database design translate the logical data model into set of SQL statements that define the database. For relational database system, it is relatively easy to translate from a logical data model into physical database.

The rules of translation are as follows: (eWebArchitecture-Physical database design, 2016)

- Entities become tables in the physical database
- Attributes become columns in the physical database. Choose an appropriate data type for each of the columns
- Unique identifiers become columns that are not allowed to have NULL values. These are referred to as primary keys in the physical database. Consider creating a unique index on the identifiers to enforce uniqueness.

Spaces are not allowed in entity names in a physical schema because these names must translate into SQL calls to create the tables. Table names should therefore conform to SQL naming rules. Model relationships by adding foreign key to one of tables involved in the

relationship. A foreign key is the unique identifier or primary key of the table on the other side of the relationship.

The physical database design mainly consist of entity attributes, data type, variable length, NULL constraints as shown below:

Table 1 Physical database design for registration

#	Name	Type	Collation	Attributes	Null	Default	
1	id	int(10)		UNSIGNED	No	None	A
2	username	varchar(255)	utf8_unicode_ci		No	None	
3	registration	varchar(255)	utf8_unicode_ci		No	None	
4	department	enum('Civil and Architecture', 'Electrical', 'Elec	utf8_unicode_ci		No	None	
5	email	varchar(255)	utf8_unicode_ci		No	None	
6	password	varchar(60)	utf8_unicode_ci		No	None	
7	remember_token	varchar(100)	utf8_unicode_ci		Yes	NULL	
8	created_at	timestamp			No	0000-00-00 00:00:00	
9	updated_at	timestamp			No	0000-00-00 00:00:00	

Table 2 Physical database design for event schedule

#	Name	Type	Collation	Attributes	Null	Default
1	id	int(10)		UNSIGNED	No	None
2	name	varchar(15)	utf8_unicode_ci		No	None
3	title	varchar(100)	utf8_unicode_ci		No	None
4	venue	enum('Multipurpose hall', 'Conference hall 1', 'Co	utf8_unicode_ci		No	None
5	agenda	varchar(255)	utf8_unicode_ci		No	None
6	start_time	timestamp			No	0000-00-00 00:00:00
7	end_time	timestamp			Yes	NULL
8	created_at	timestamp			No	0000-00-00 00:00:00
9	updated_at	timestamp			No	0000-00-00 00:00:00

Table 3 Physical database design for file upload

#	Name	Type	Collation	Attributes	Null	Default
1	agenda_id	int(10)		UNSIGNED	No	None
2	filename	varchar(255)	utf8_unicode_ci		No	None
3	mime	varchar(255)	utf8_unicode_ci		No	None
4	original_filename	varchar(255)	utf8_unicode_ci		No	None
5	created_at	timestamp			No	0000-00-00 00:00:00
6	updated_at	timestamp			No	0000-00-00 00:00:00

4 CHAPTER FOUR: APPLICATION PROGRAM DESIGN

Application program design is derived from the functional requirements of a system. The functional requirements are gathered from the requirement gathering and analysis and from the functional point of system, application program is design. The application program design include overall system flowchart which describes basic algorithm in implementation and working of CEMS.
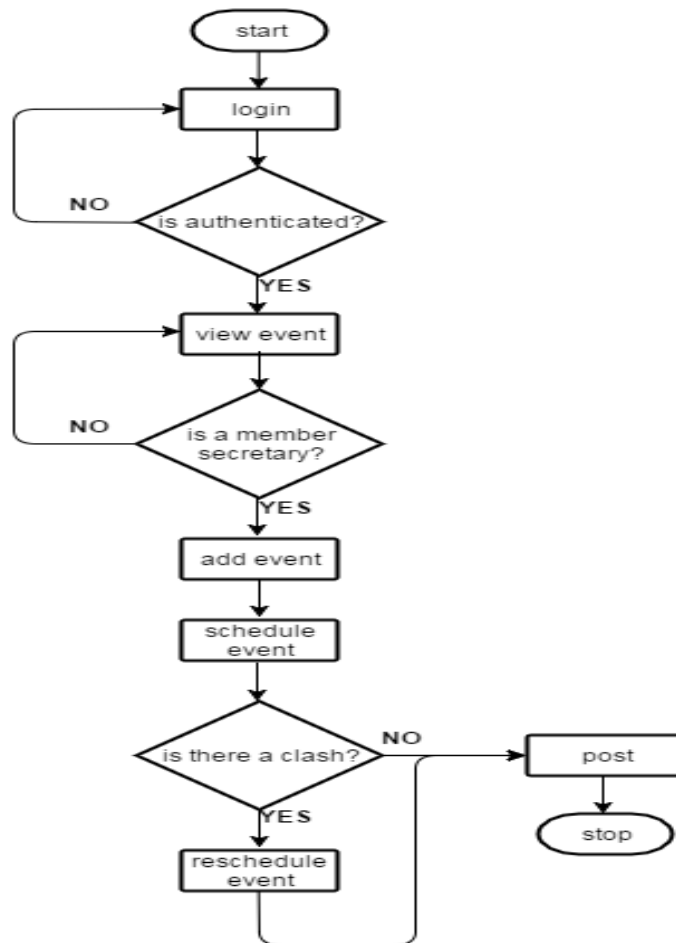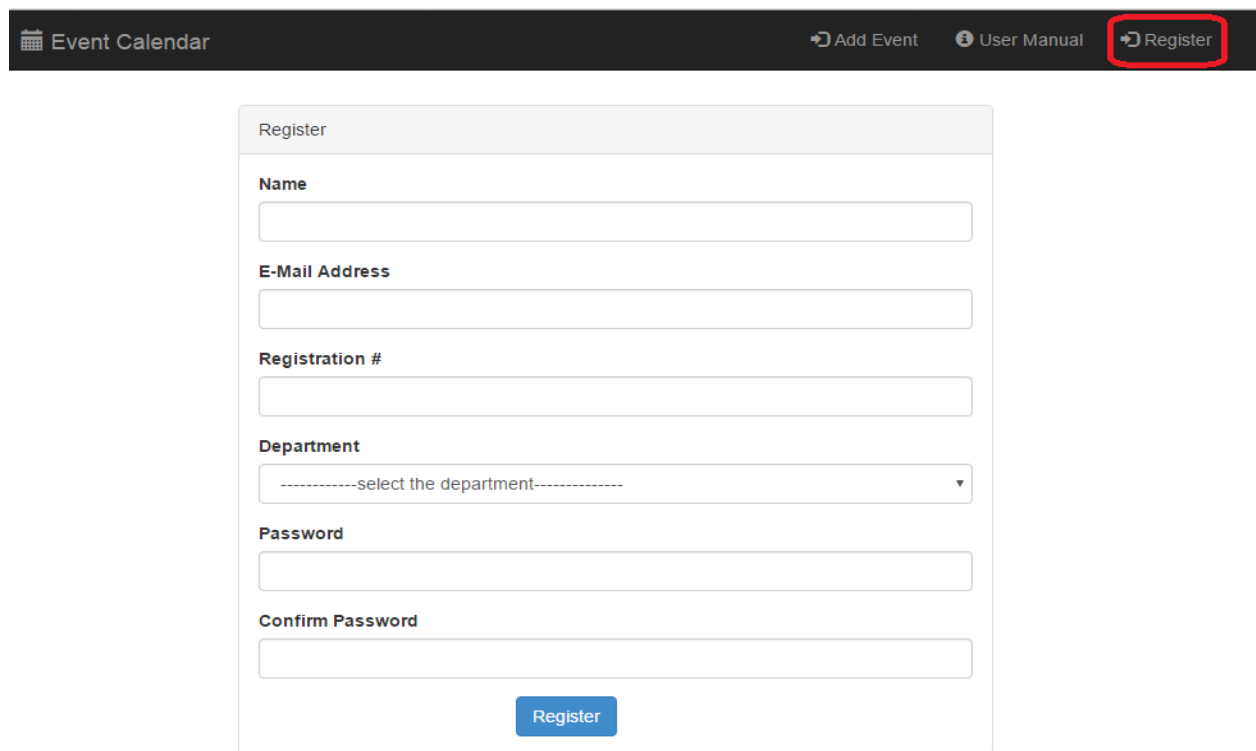
Figure 8 Flowchart for the overall system functionality

The working functionality of our system shows that first of all, we have to login in the system. That is, if system user is authenticated one, they are being prompted to schedule the events. If the system user is not authenticated, then they are prompted failure login. The authenticated user includes of those who register with system. After granting required privileges, if the authenticated user is a member secretary, then they are granted privileges to add events. If the

authenticated user is not a member secretary, then they are granted the privileges to view the events only. After the approval to the system, they can add the event, schedule the events and can regulate the flow of events. If the event schedule is met with clashes, the system is design to reschedule the events. If no clashes met, then they can post the events.

4.1 Implementation

The implementation phase consist of implementation of data and functional requirements gathered. When first accessing system, we are prompted to login page. A login page is required for those who have registered via registration form and they are those who is held responsible for scheduling the event. After registration and login they are prompted with event view calendar. Below given is the registration page and then after successful registration, we are prompted with login page.

Figure 9: Registration form page

Figure 10: Login page view

A guest user can only view the events if not registered and the member secretary are given whole privileges after login in. Below are the given page to view event and the guest user can simply view the event navigated with month, week and day with simultaneous month displayed in calendar without login into the system.

Figure 11: Event view page for guest user

Below given is the page after successful login prompted with login successful message. Then the member secretary is immediately directed to add event form where it provides name, title, time, venue, and agenda and to add member.

Figure 12: Add event form

Below given is the page view to add member. Member secretary can add the member present in the event by providing name and the email so that later on members are notified via email about the scheduled events.

Figure 13: Add member form

After adding the event, member secretary can view the event scheduled with event title, venue and time provided with a member secretary name. Below is the page to view the added event.

Figure 14: Event details

By navigating to event list, member secretary can view the series of event list where he/she can either edit or delete the scheduled event. Below given are the event list

Figure 15: Event list page

Navigating to user manual provides the beginner for easy access to system without facing much difficulties. It is provided with information as to how to add event, view event, schedule event. Below is the page to view the user manual.
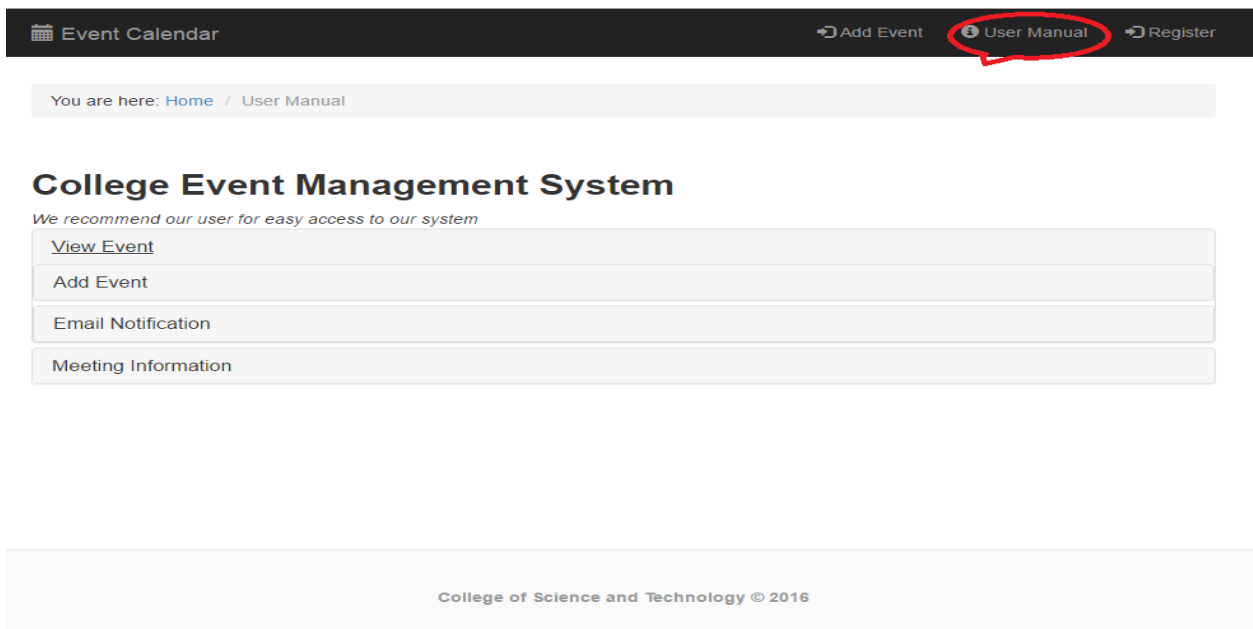
Figure 16: User manual

4.2 Integration and Testing

This system is best supported with latest version of Google Chrome, Mozilla Firefox, and Safari and doesn't support Internet Explorer browser. The application provide an optimal viewing experience across wide range of device from desktop computer to mobile phone. This responsive design was accomplished using Bootstrap grid system.

4.2.1 Unit Testing

Laravel framework has a built-in unit testing function called PHPUnit Test developed by Sebastian Bergmann, it is a unit testing framework that uses assertions to verify that code under test (or SUT, for *system under test*) behaves as expected (Way, 2013).

4.2.2 Integration Testing

After integrating all the components together we did final testing on the complete system using dummy value for adding, fetching and deletion of data from database via GUI. And the system functionalities are thoroughly tested.

5   CHAPTER FIVE: CONCLUSION

5.1 Conclusion

The college event management system is developed to ease the events management in our college. With daily activities taking place, there was need of management of those activities especially the various events taking place in our college. Every day, the various events taking place in our college lack management like there is constant clashes, member are not notified about events, time clashes and venue clashes. Such clashes in daily routine are issues and our system is developed in such a way that the mentioned problems are being solved.

The application provides a systematic approach in managing various events in college and at the same time, it provide ease of access for the beginner to go through system easily. The system also provide advantageous over paper work where the application contain information about the meeting that are held or for future references. The overall system is flexible for the managing events.

For the development of the system takes lot of research and learning various applications, software tools, and framework. The exploration as the development of project make us gain more knowledge about various platform learnings and experiences to develop system in future.

5.2 Future Works

In this project, system is developed according to the scope reflected i.e. we have done with the scheduling events, meeting information management, user management, room allocation, notification of events. The scope remains limited and simple but the methodology including all the database design and coding and implementation was beyond our capabilities.

We had learned all those basic concepts with the capabilities we had in developing the system application. However, the out of scope we had defined can be carried out by those who will next replaced the current student's batch. The two task left to be carried out includes course timetabling management and examination timetabling management.

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