

CHAPTER-1

INTRODUCTION

1.1 OVERVIEW

Swaranjali Fest management is the online platform where all the processes of college annual fest are integrated from participation to certificate distribution. The website includes all the information about the events organized by the college. By registering one can easily participate in any event of his/her choice and get details about the event like venue, timing, its coordinators and their contact details.

The admin(event head) has all the rights of adding, updating, deleting as well as uploading the posters of various activities which are organized by different departments. The faculty coordinators for particular event is also allotted by the Event Head. The student coordinators are further assigned by the faculty coordinators of their respective events. All the information about the procedure is circulated through mailing system.

CHAPTER-2

PROBLEM IDENTIFICATION &FEASIBILITY ANALYSIS

2.1 PROBLEM DOMAIN

The following are the challenges faced by the organizers as well as the participants during the annual fest (swaranajli)-

- All the students are unable to get the information about all the events organized by the college and hence they are unable to participate in the event of their interest.
- The faculty and student coordinators have to visit each and every class for the announcement of the event details.
- Event head performs all the work like preparing list of events, their venue, list of participants manually which is very hard and tedious work.
- During the distribution of certificates teachers visit each class to distribute certificates.

2.2 SOLUTION DOMAIN

The following are the quick fix to problem domain-

- Since all the processes and information is combined in a single platform hence everyone can get information easily by simply visiting the website.
- The coordinators of particular event can simply upload the posters of events on the website and participants can refer them. There is no need to visit classes.
- No manual work is required since all the entries are stored in database and can be retrieved whenever needed.
- The respective participants are informed through mail and they can collect certificates from the coordinators.

2.3 NEED & SCOPE

Need-

The project smoothen the efforts of the person upstairs and partakers both. Hence there is the need for the project at every level of Swaranjali organization i.e. from event head to participant module and from department to student coordinator module. The project is needed to-

- **Provide vision and direction** – The project identifies the aims and vision of the task and gives it purpose and direction. It also provides the point of contact for the objective. It is responsible for all communication between event head, participants and the project team, which decreases confusion and increases accuracy.
- **Increase efficiency** – Our system supports the management team to define the tasks which need to be undertaken in order to successfully accomplish the fest , and in what order they should occur. This ensures that they are completed efficiently.
- **Manage time** – Time is arguably the biggest challenge of any activity. The project helps to control the fest schedule by examining milestones, key dates and the critical path throughout the period.
- **Schedule the work** – The project ensures that all the work and tasks are done in the appropriate order. This includes calculating the time a task takes and solving problems which may cause delay in meeting the deadlines.

Scope-

- To ease the manual work of managing events easy.
- To make students decipher the objective of conducting Swaranjali.
- Eliminate the tedious work of event head and also saves time.

2.4 TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes for implementing this system.

The technical feasibility assessment is centered on the technical resources available in institution. It helps organizations assess if the technical resources meet capacity and whether the technical team is capable of converting the ideas into working systems. Technical feasibility also involves evaluation of the hardware and the software requirements of the proposed system. One such project has already been deployed by the institution and hence the evaluation of the technical requirements is quite easy.

2.5 OPERATIONAL FEASIBILITY

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

The success and the desired operational outcomes are analyzed by the feedback system and then informed to the guide and development team. The project is design-dependent parameters such as reliability, maintainability, supportability, usability, sustainability, affordability, and others.

CHAPTER-3

SOFTWARE ENGINEERING APPROACH

3.1 SOFTWARE MODEL USED

3.1.1 Description

The Prototyping Model is a systems development method (SDM) in which a prototype (an early approximation of a final system or product) is built, tested, and then reworked as necessary until an acceptable prototype is finally achieved from which the complete system or product can now be developed. This model works best in scenarios where not all of the project requirements are known in detail ahead of time. It is an iterative, trial-and-error process that takes place between the developers and the users. Software prototyping is becoming very popular as a software development model, as it enables to understand customer requirements at an early stage of development. It helps get valuable feedback from the customer and helps software designers and developers understand about what exactly is expected from the product under development.

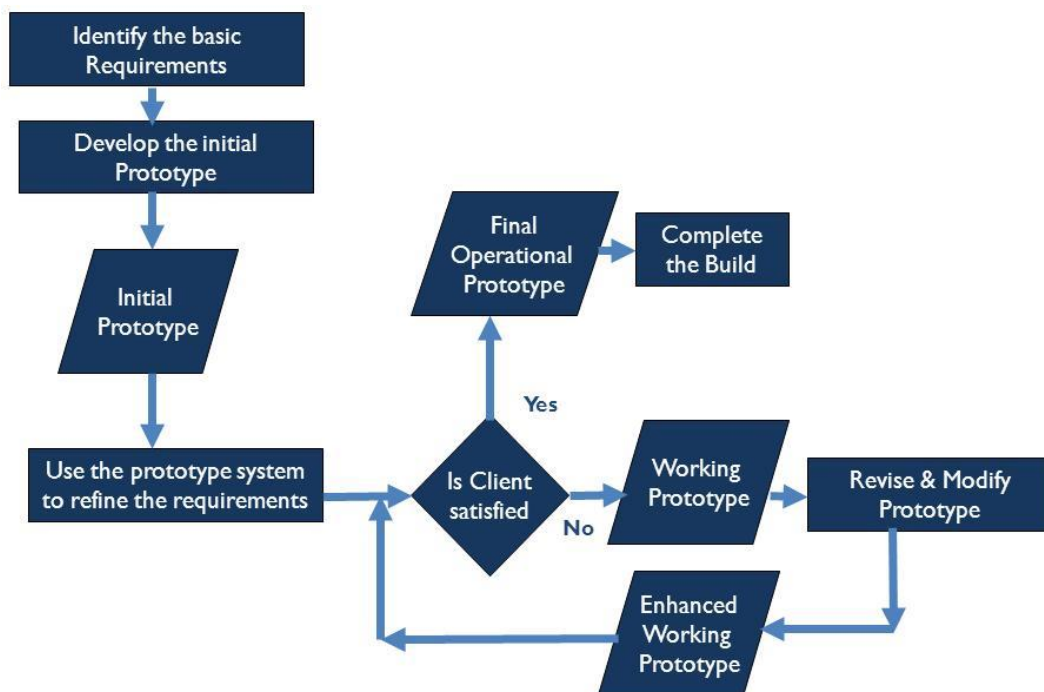


Fig 3.1 Prototype Model

3.1.2 Reason for use

Risk of insufficient requirement analysis owing to too much dependency on the prototype.

- Users may get confused in the prototypes and actual systems.
- Practically, this methodology may increase the complexity of the system as scope of the system may expand beyond original plans.
- Developers may try to reuse the existing prototypes to build the actual system, even when it is not technically feasible.
- The effort invested in building prototypes may be too much if it is not monitored properly.

3.2 PLATFORM SPECIFICATION

3.2.1 Hardware Specification

- 10 GB of disk space
- 8 CPU cores
- 8 GB RAM

3.2.2 Software Specifications

HTML:

HTML or **Hypertext Markup Language** is the standard markup language used to create web pages.

HTML is written in the form of HTML elements consisting of *tags* enclosed in angle brackets (like `<html>`). HTML tags most commonly come in pairs like `<h1>` and `</h1>`, although some tags represent *empty elements* and so are unpaired, for example ``. The first tag in a pair is the *start tag*, and the second tag is the *end tag* (they are also called *opening tags* and *closing tags*). Though not always necessary, it is best practice to append a slash to tags which are not paired with a closing tag.

The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.

Cascading Style Sheets (CSS):

It is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content .

MySQL:

MySQL is developed, distributed, and supported by Oracle Corporation. MySQL is a database system used on the web it runs on a server. MySQL is ideal for both small and large applications. It is very fast, reliable, and easy to use. It supports standard SQL. MySQL can be compiled on a number of platforms

The data in MySQL is stored in tables. A table is a collection of related data, and it consists of columns and rows. Databases are useful when storing information categorically.

FEATURES OF MySQL:

- Works on many different platforms.
- Tested with Purify (a commercial memory leakage detector) as well as with Val grind, a GPL tool.
- Uses multi-layered server design with independent modules.

Security:

- A privilege and password system that is very flexible and secure, and that enables host-based verification.
- Password security by encryption of all password traffic when you connect to a server.

Scalability and Limits:

- Support for large databases. We use MySQL Server with databases that contain 50 million records. We also know of users who use MySQL Server with 200,000 tables and about 5,000,000,000 rows.
- Support for up to 64 indexes per table (32 before MySQL 4.1.2). Each index may consist of 1 to 16 columns or parts of columns. The maximum index width is 767 bytes for **InnoDB** tables, or 1000 for **MyISAM**; before MySQL 4.1.2, the limit is 500 bytes. An index may use a prefix of a column for **CHAR**, **VARCHAR**, **BLOB**, or **TEXT** column types.

PHP:

WHAT IS PHP?

- PHP is an acronym for "PHP Hypertext Preprocessor"
- PHP is a widely-used, open source scripting language
- PHP scripts are executed on the server
- PHP costs nothing, it is free to download and use

WHAT CAN PHP DO?

- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in your database
- PHP can restrict users to access some pages on your website
- PHP can encrypt data

With PHP you are not limited to output HTML. You can output images, PDF files, and even Flash movies. You can also output any text, such as XHTML and XML.

WHY PHP?

- PHP runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
- PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- PHP supports a wide range of databases
- PHP is free. Download it from the official PHP resource: www.php.net.

CHAPTER-4

DESIGNS

4.1 Use Case Diagram

To model a system, the most important aspect is to capture the dynamic behavior. Dynamic behavior means the behavior of the system when it is running/operating.

Only static behavior is not sufficient to model a system rather dynamic behavior is more important than static behavior. In UML, there are five diagrams available to model the dynamic nature and use case diagram is one of them. Now as we have to discuss that the use case diagram is dynamic in nature, there should be some internal or external factors for making the interaction.

These internal and external agents are known as actors. Use case diagrams consists of actors, use cases and their relationships. The diagram is used to model the system/subsystem of an application. A single use case diagram captures a particular functionality of a system.

Hence to model the entire system, a number of use case diagrams are used.

Purpose of Use Case Diagram:

The purpose of use case diagram is to capture the dynamic aspect of a system. However, this definition is too generic to describe the purpose, as other four diagrams (activity, sequence, collaboration, and Statechart) also have the same purpose. We will look into some specific purpose, which will distinguish it from other four diagrams.

Use case diagrams are used to gather the requirements of a system including internal and external influences. These requirements are mostly design requirements. Hence, when a system is analyzed to gather its functionalities, use cases are prepared and actors are identified.

When the initial task is complete, use case diagrams are modelled to present the outside view.

In brief, the purposes of use case diagrams can be said to be as follows –

- Used to gather the requirements of a system.
- Used to get an outside view of a system.
- Identify the external and internal factors influencing the system.

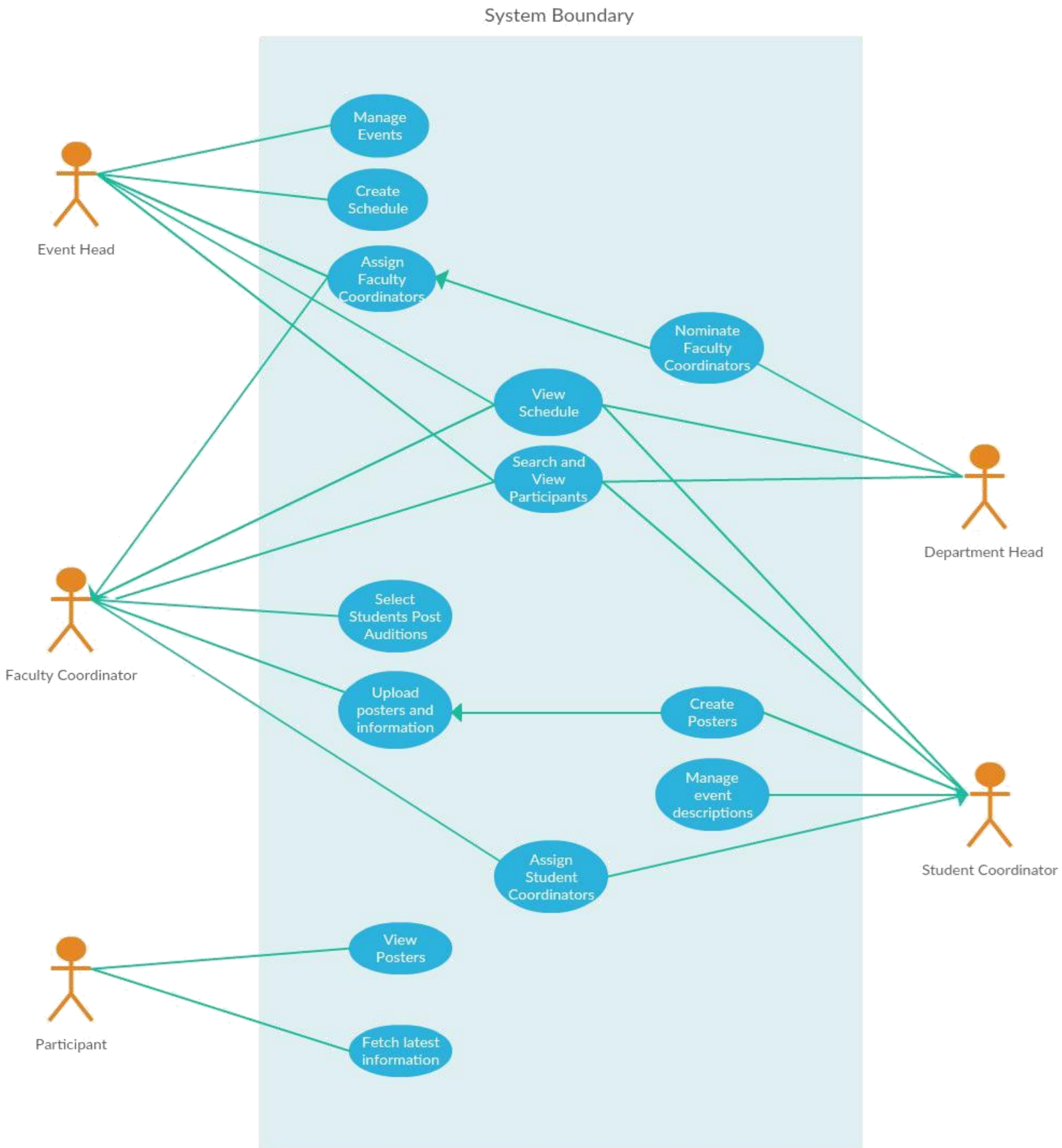


Fig 4.1.1 Use Case Diagram

4.2 Sequence Diagram

Sequence diagrams describe interactions among classes in terms of an exchange of messages over time. They're also called event diagrams. A sequence diagram is a good way to visualize and validate various runtime scenarios. These can help to predict how a system will behave and to discover responsibilities a class may need to have in the process of modeling a new system.

They illustrate how the different parts of a system interact with each other to carry out a function, and the order in which the interactions occur when a particular use case is executed. In simpler words, a sequence diagram shows different parts of a system work in a 'sequence' to get something done.

Sequence Diagram Notations

A sequence diagram is structured in such a way that it represents a timeline which begins at the top and descends gradually to mark the sequence of interactions. Each object has a column and the messages exchanged between them are represented by arrows.

Sequence Diagram Key Parts

- **Participant:** Object or entity that acts in the diagram – diagram starts with an unattached "found message" arrow.
- **Message:** Communication between participant objects .
- **Axes:** Horizontal axes are those which object/participant is acting and vertical are in time (down -> forward in time)

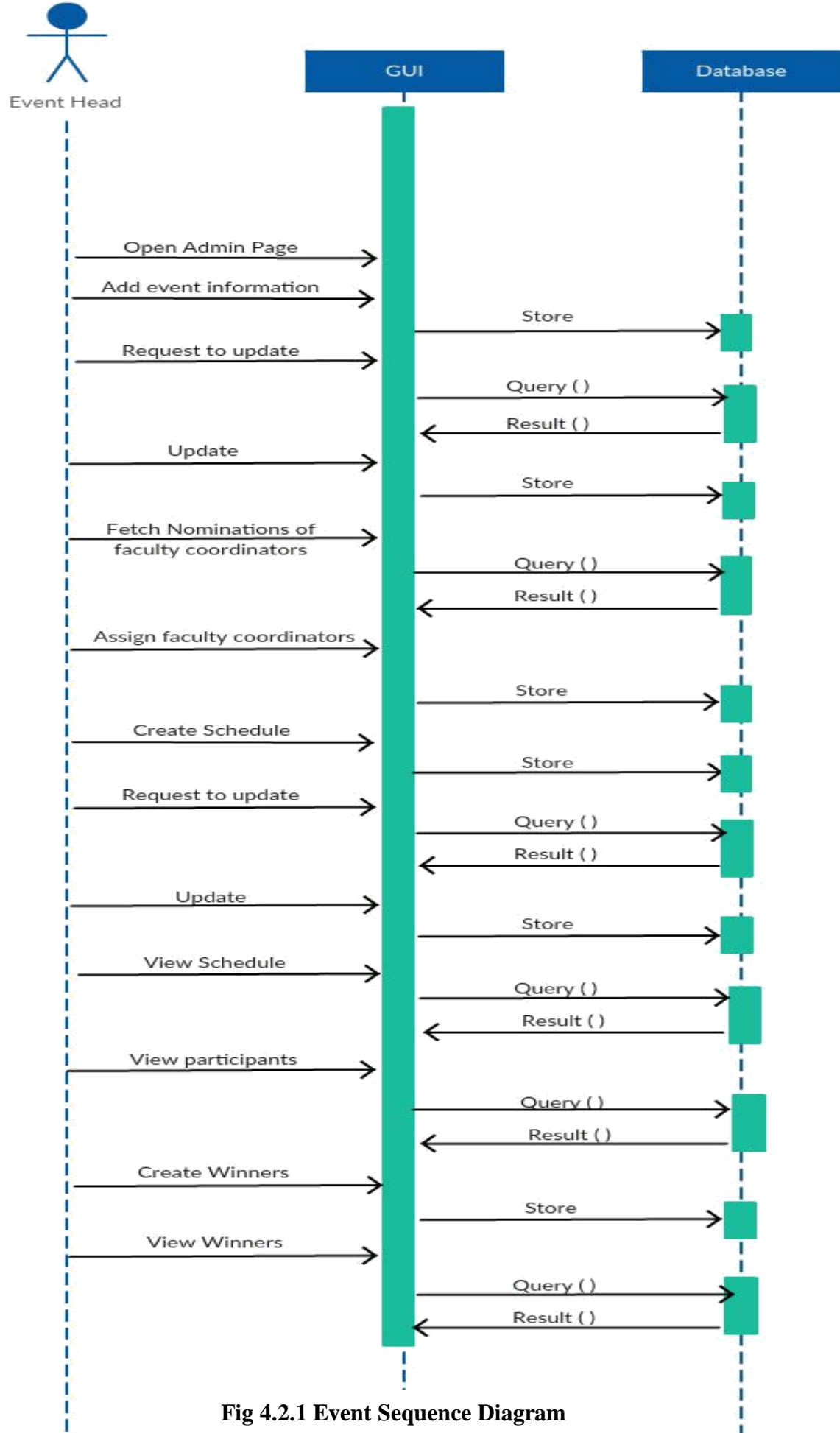


Fig 4.2.1 Event Sequence Diagram

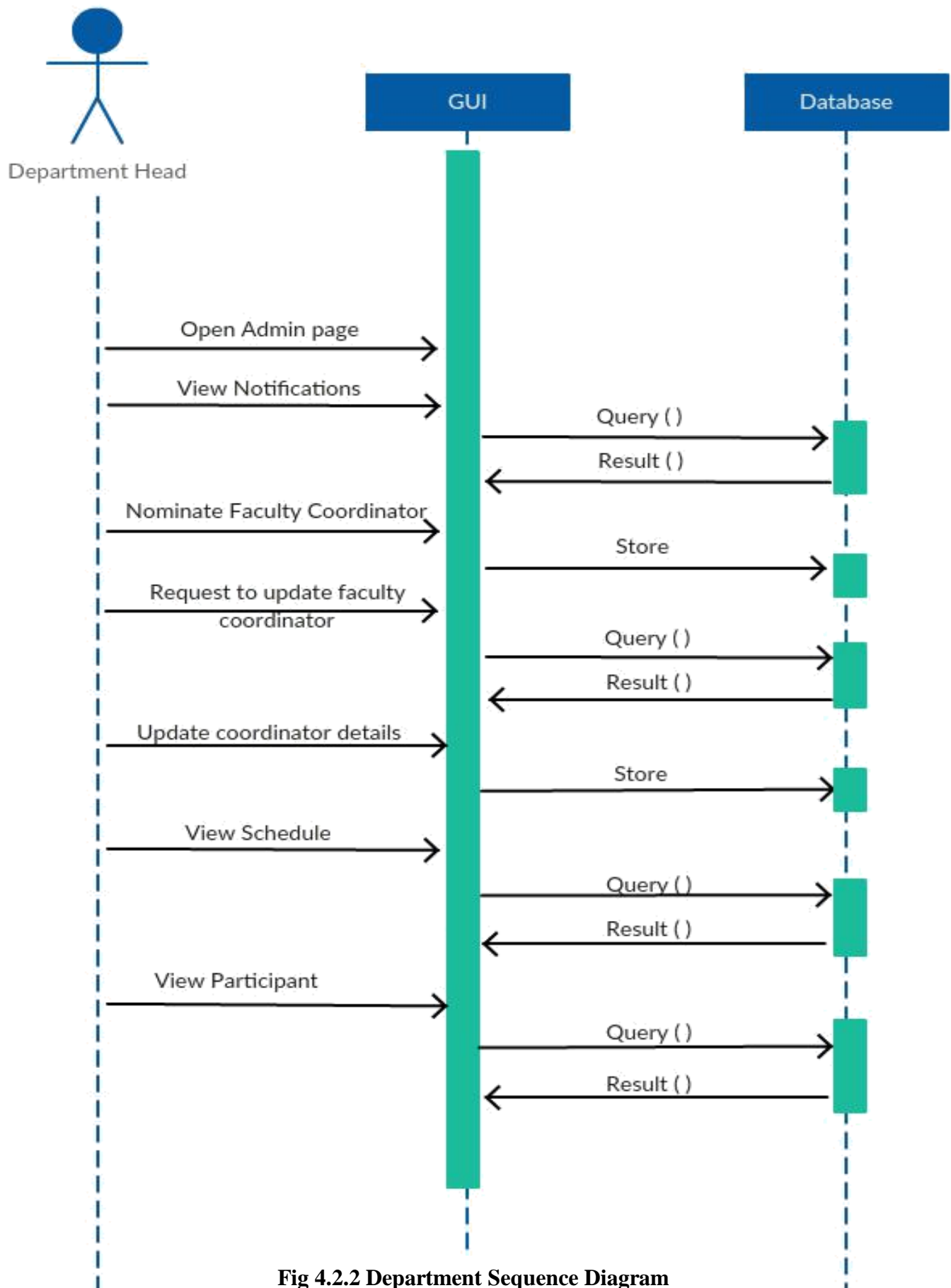


Fig 4.2.2 Department Sequence Diagram

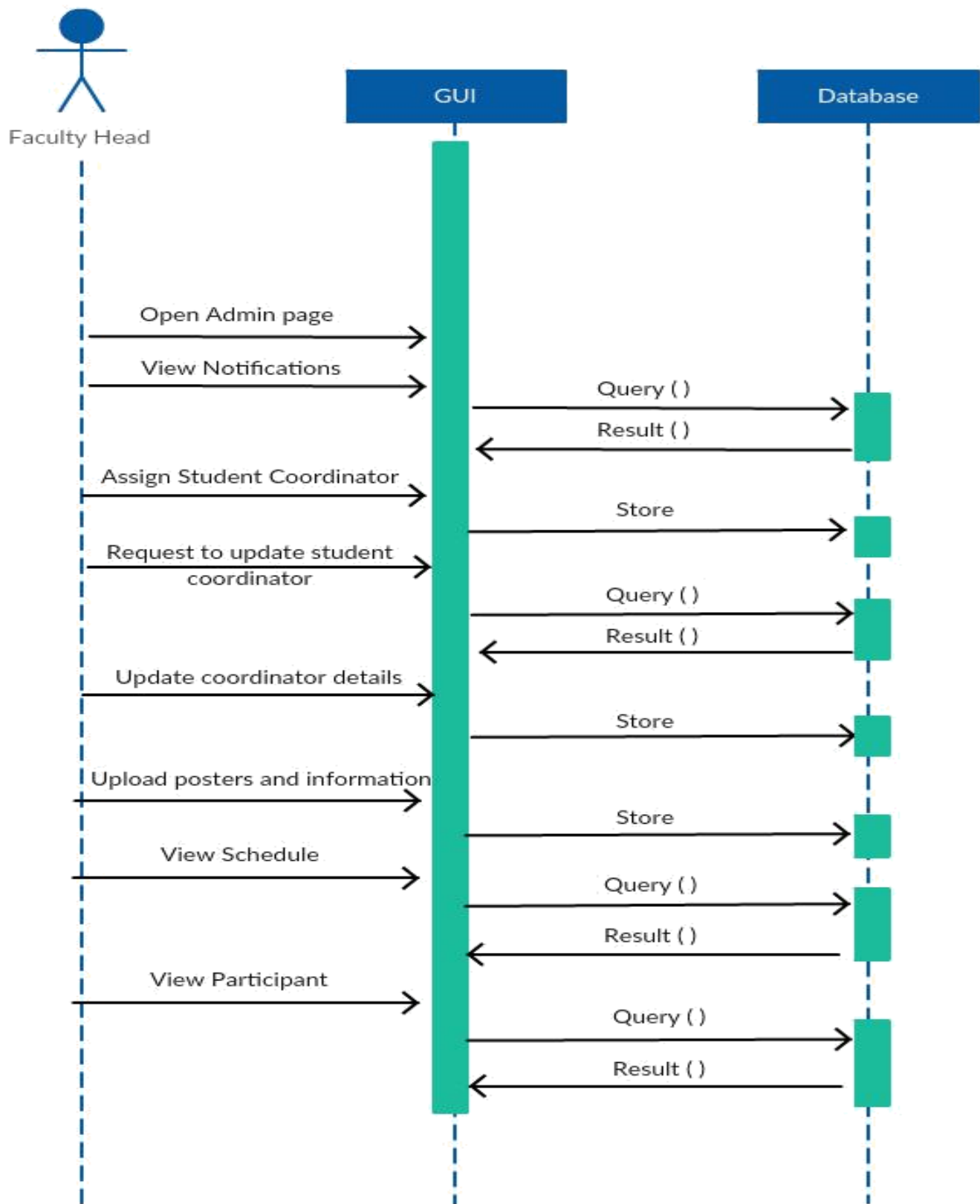


Fig 4.2.3 Faculty Sequence Diagram

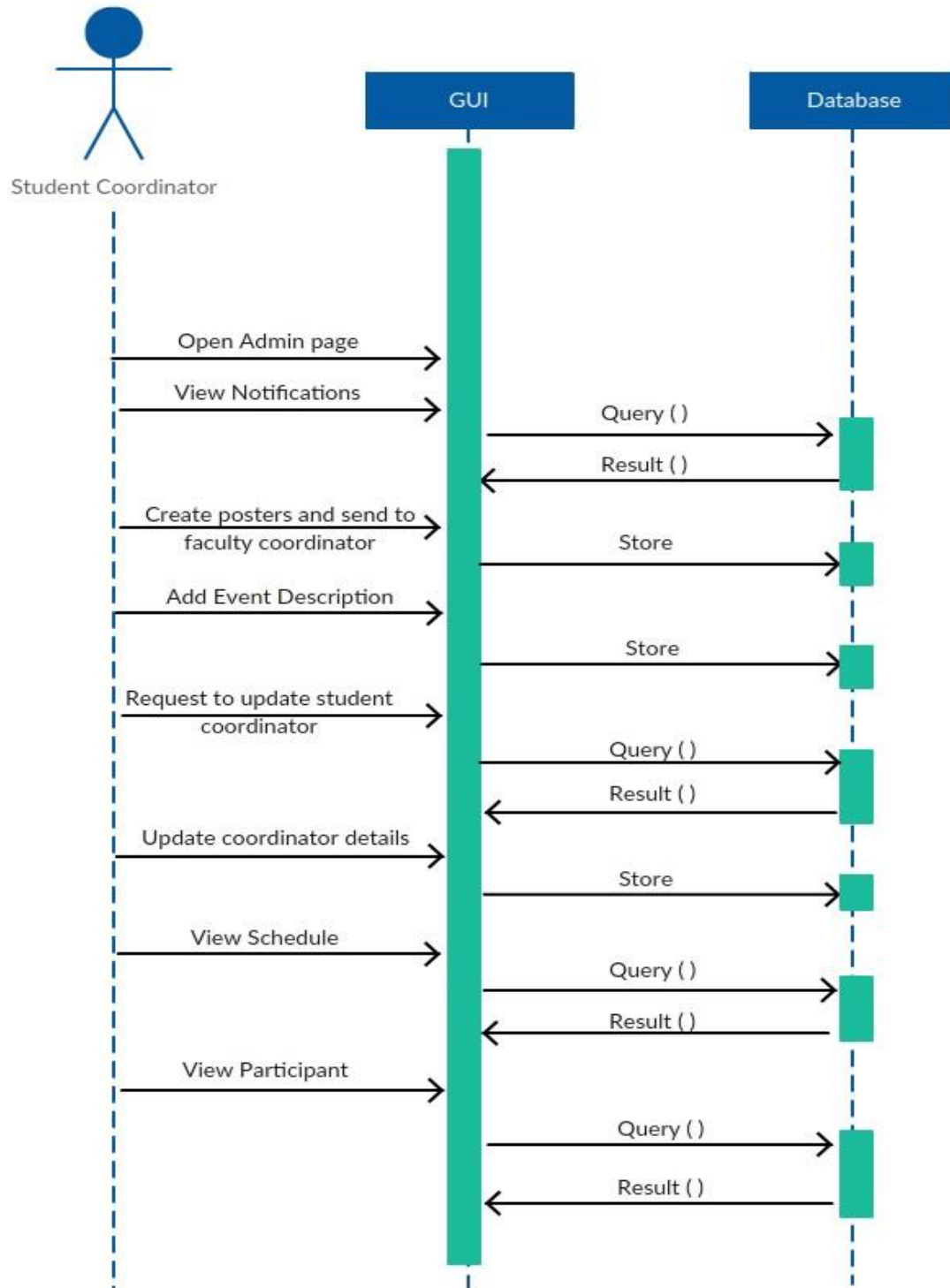


Fig 4.2.4 Student Sequence Diagram

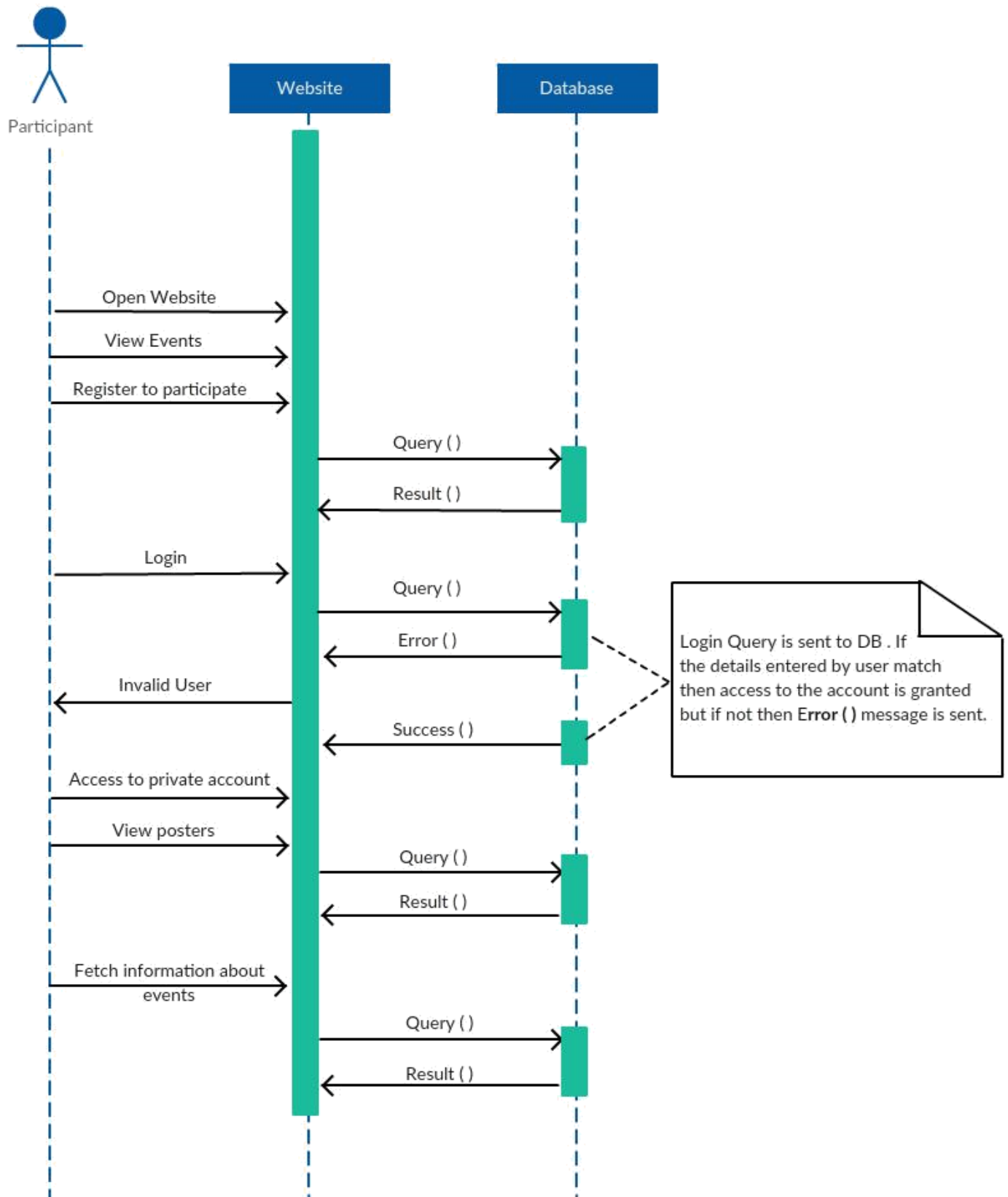


Fig 4.2.5 Participant Sequence Diagram

4.3 ACTIVITY DIAGRAM

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system.

Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all type of flow control by using different elements such as fork, join, etc

Purpose of Activity Diagrams

The basic purposes of activity diagrams is similar to other four diagrams. It captures the dynamic behavior of the system. Other four diagrams are used to show the message flow from one object to another but activity diagram is used to show message flow from one activity to another.

Activity is a particular operation of the system. Activity diagrams are not only used for visualizing the dynamic nature of a system, but they are also used to construct the executable system by using forward and reverse engineering techniques. The only missing thing in the activity diagram is the message part.

It does not show any message flow from one activity to another. Activity diagram is sometimes considered as the flowchart. Although the diagrams look like a flowchart, they are not. It shows different flows such as parallel, branched, concurrent, and single.

The purpose of an activity diagram can be described as –

- Draw the activity flow of a system.
- Describe the sequence from one activity to another.
- Describe the parallel, branched and concurrent flow of the system.

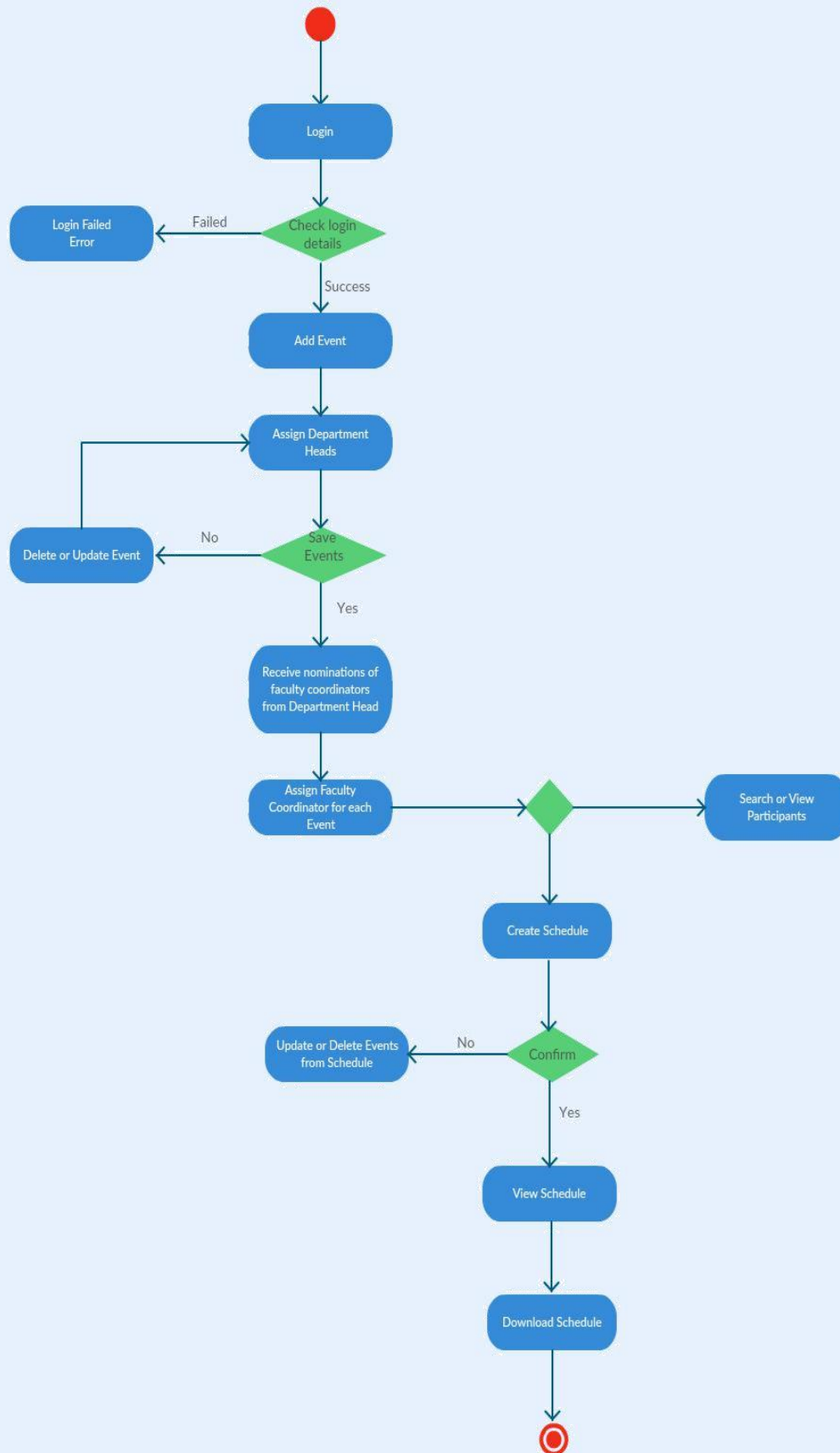


Fig 4.3.1 Event Head Activity Diagram

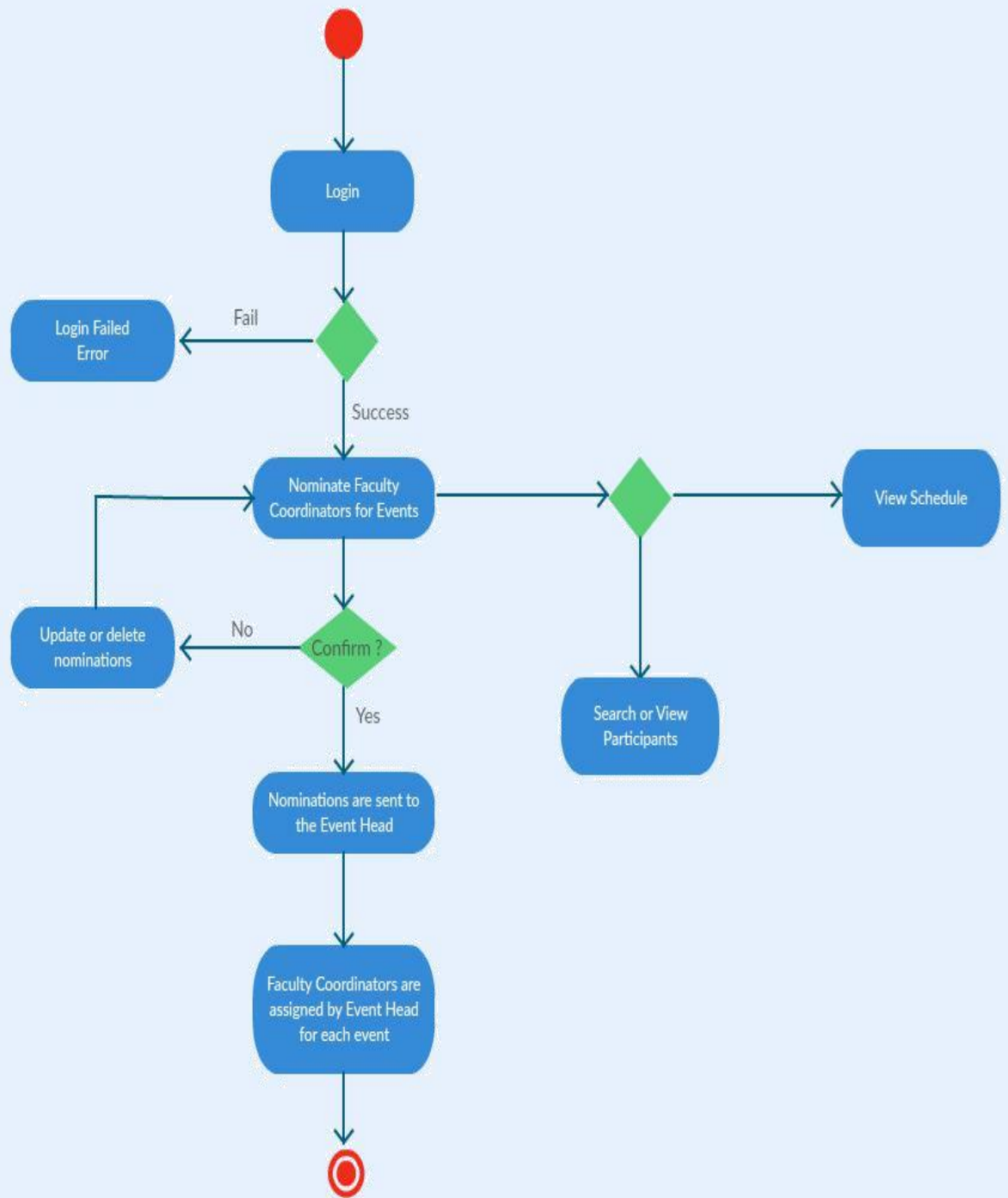


Fig 4.3.2 Department Head Activity Diagram

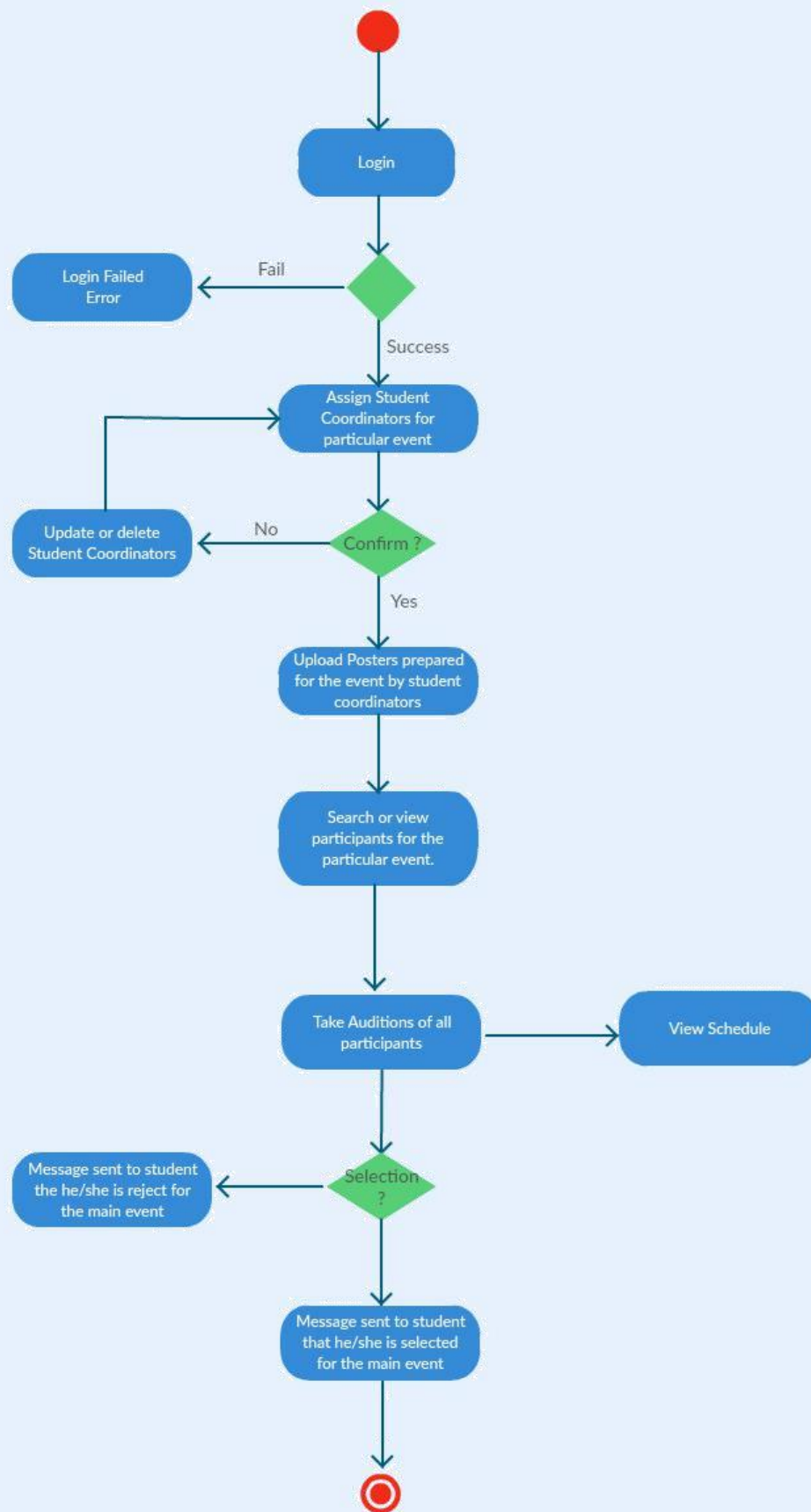


Fig 4.3.3 Faculty Coordinator Activity Diagram

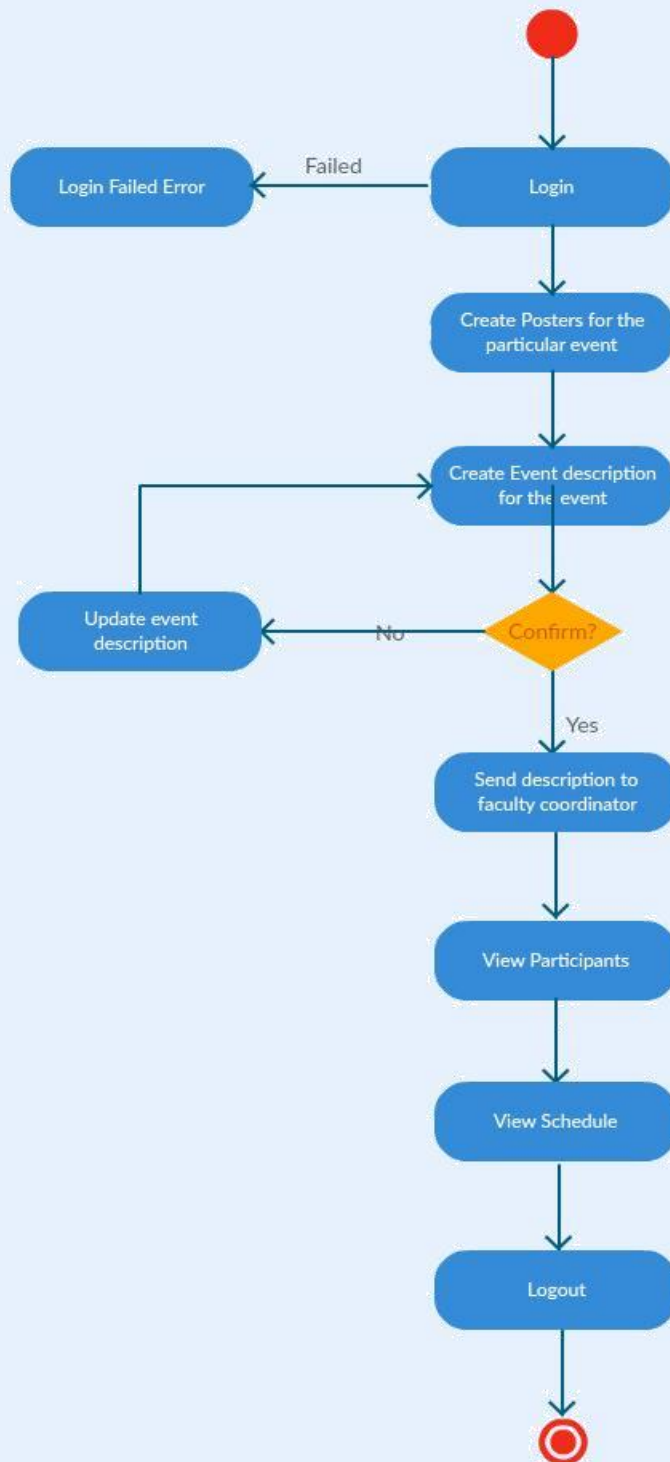


Fig 4.3.4 Student Coordinator Activity Diagram

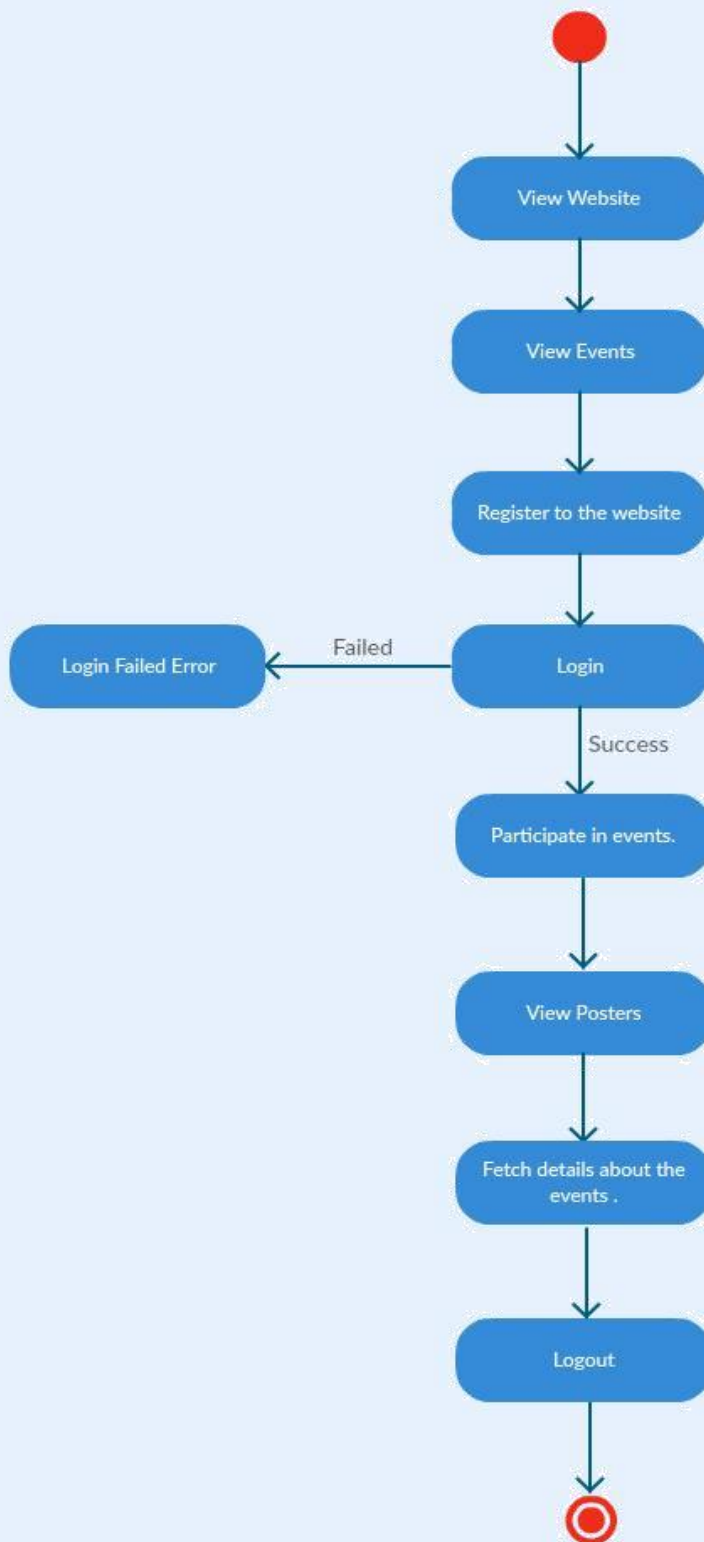


Fig 4.3.5 Participant Activity Diagram

4.4 ENTITY-RELATIONSHIP DIAGRAM

An entity–relationship model (ER model) describes inter-related things of interest in a specific domain of knowledge. An ER model is composed of entity types (which classify the things of interest) and specifies relationships that can exist between instances of those entity types. In software engineering an ER model is commonly formed to represent things that a business needs to remember in order to perform business processes. Consequently, the ER model becomes an abstract data model that defines a data or information structure that can be implemented in a database, typically a relational database.

Entity

An entity can be a real-world object, either animate or inanimate, that can be easily identifiable. For example, in a school database, students, teachers, classes, and courses offered can be considered as entities. All these entities have some attributes or properties that give them their identity. An entity set is a collection of similar types of entities. An entity set may contain entities with attribute sharing similar values. For example, a Students set may contain all the students of a school; likewise a Teachers set may contain all the teachers of a school from all faculties. Entity sets need not be disjoint.

Attributes

Entities are represented by means of their properties, called **attributes**. All attributes have values. For example, a student entity may have name, class, and age as attributes.

There exists a domain or range of values that can be assigned to attributes. For example, a student's name cannot be a numeric value. It has to be alphabetic. A student's age cannot be negative, etc.

Types of Attributes

- **Simple attribute** – Simple attributes are atomic values, which cannot be divided further.
- **Composite attribute** – Composite attributes are made of more than one simple attribute.
- **Derived attribute** – Derived attributes are the attributes that do not exist in the physical database, but their values are derived from other attributes present in the database. For example, average_salary in a department should not be saved directly in the database, instead it can be derived.
- **Single-value attribute** – Single-value attributes contain single value.
- **Multi-value attribute** – Multi-value attributes may contain more than one values.

Entity-Set and Keys

Key is an attribute or collection of attributes that uniquely identifies an entity among entity set.

Relationship

The association among entities is called a relationship.

Relationship Set

A set of relationships of similar type is called a relationship set. Like entities, a relationship too can have attributes. These attributes are called descriptive attributes.

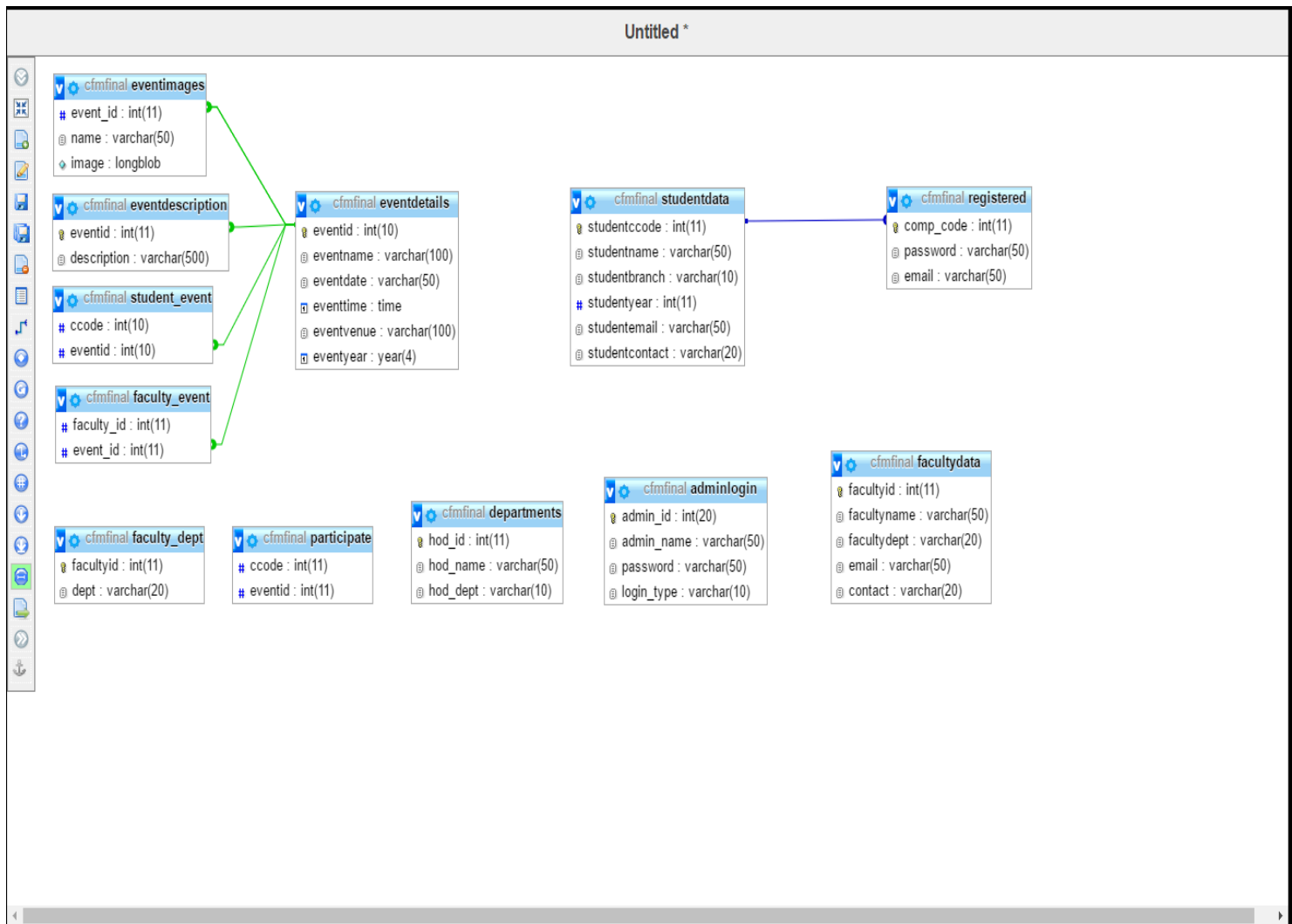


Fig 4.4.1 E-R Diagram

CHAPTER-5

IMPLEMENTATION PHASE

5.1 SUMMARIZE MODULES

5.1.1 Registration

It collects the compulsory information of participant and creates an account, based on information provided.

5.1.2 Login

It collects the username and password and check its validity. If the username and password are valid, it redirects us to the logged in page. That includes your profile and other options including view and participate in events and logout.

5.1.3 Update

It updates the values of a specific account through which you are logged in. This helps in keeping the information of admin up to date so that it is easy for other user to identify the changes made and deal with them.

5.1.4 Mailing

It sends a mail to a specific admin you want to contact through the account of event head. Through this we can establish communication with automation easily.

5.1.5 Search

It searches based on data provided. Every admin account has search options for different lists. It helps to maintain usability of the system .

5.1.5 Upload Image

It uploads whatever image you want to upload in your profile picture and also uploads images of posters related to different events to the site for display. Authorised user can also change uploaded images whenever required.

5.2 GUI

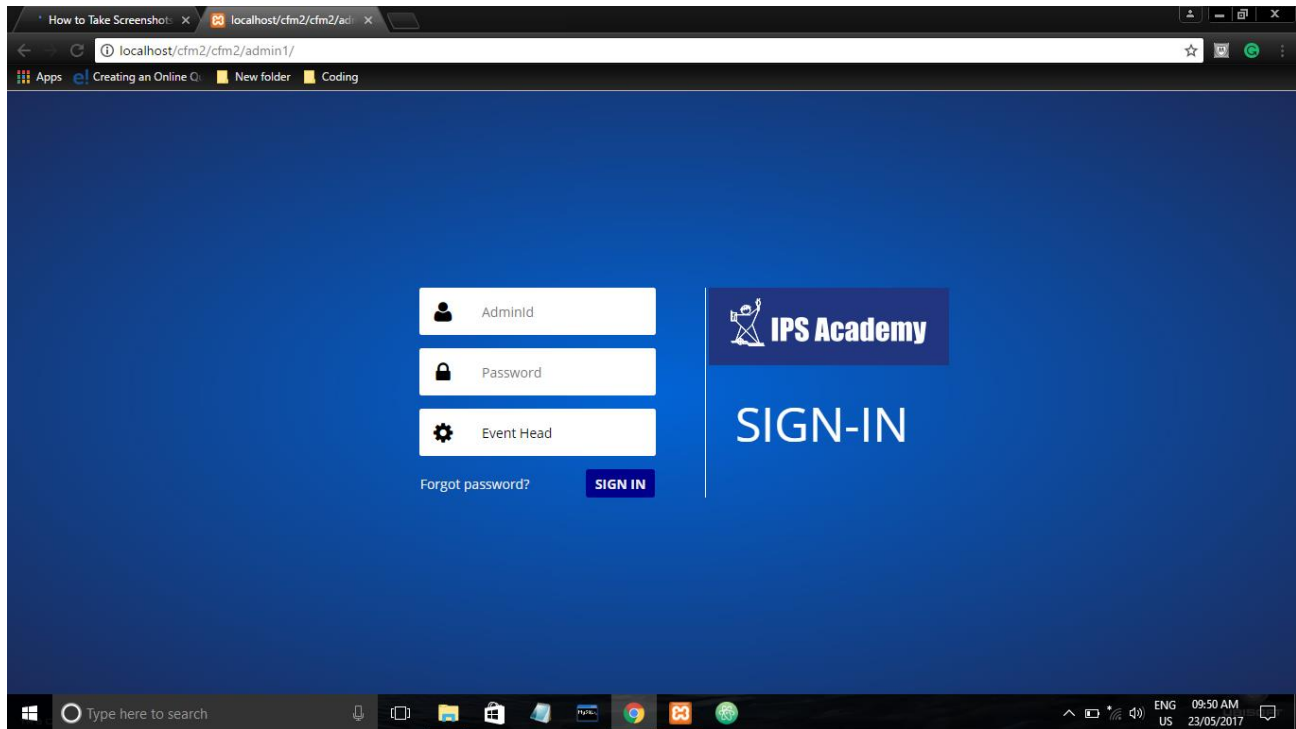


Fig 5.1 Sign-In

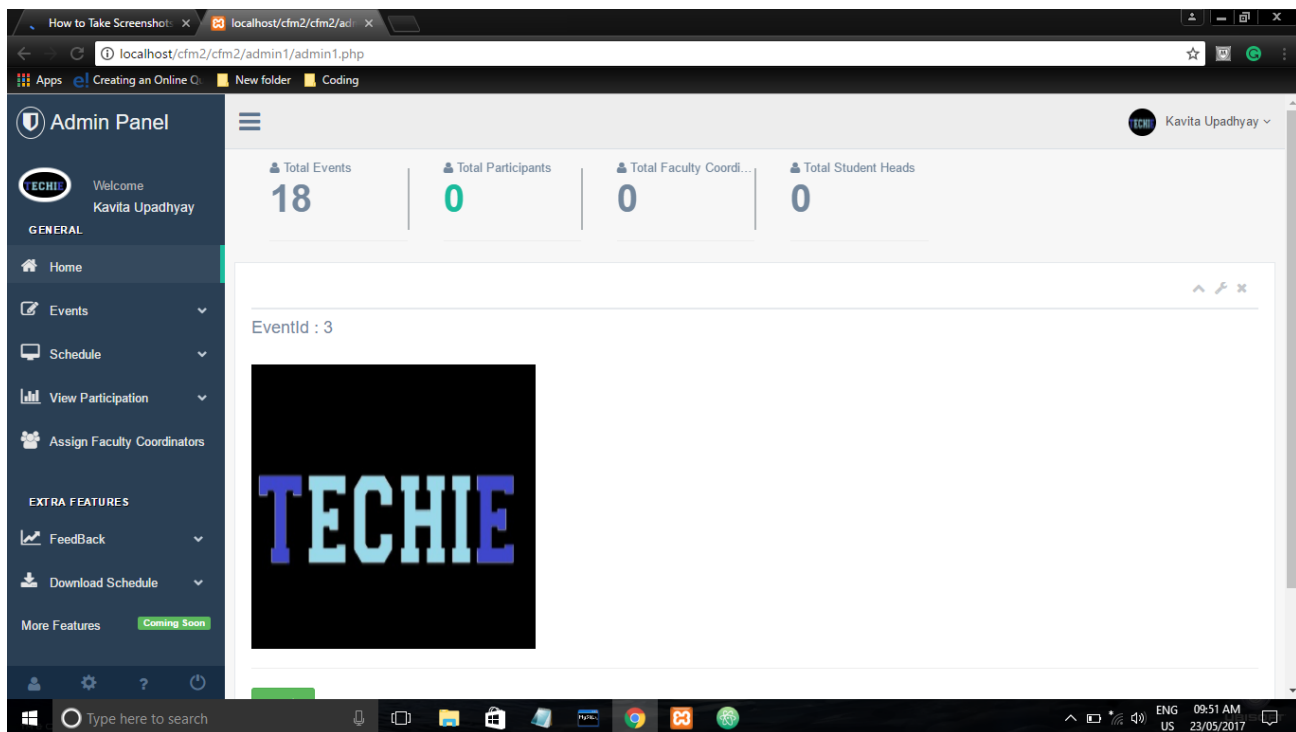


Fig 5.2 Event Head Home

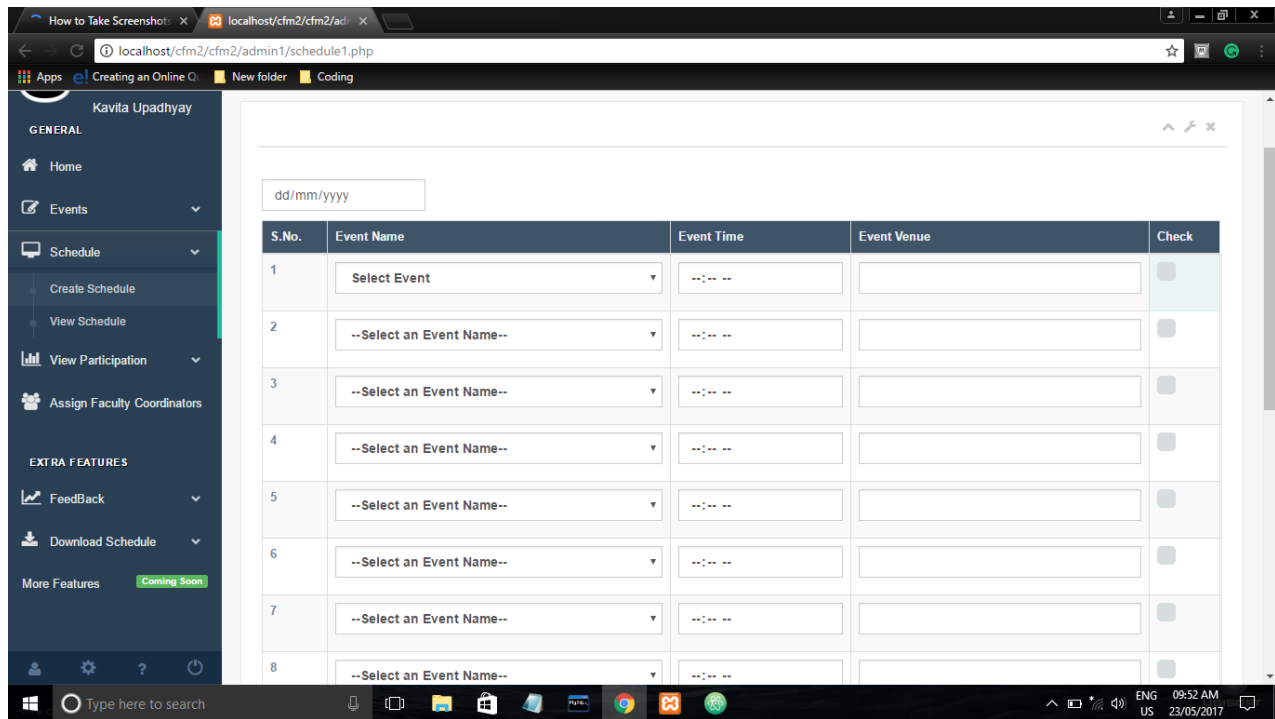


Fig 5.3 Create Schedule

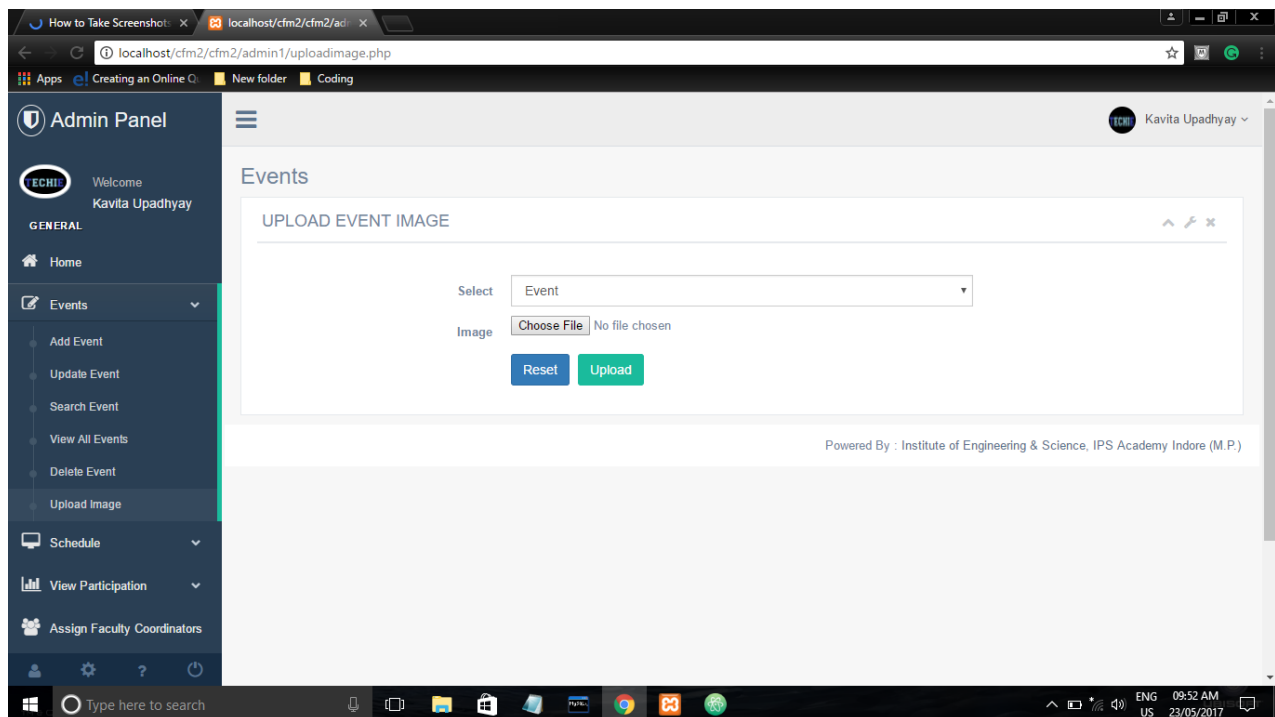


Fig 5.4 Upload Image

Admin Panel

Welcome Kavita Upadhyay

GENERAL

- Home
- Events
- Schedule
- View Participation
- Search By Event
- All Participations
- Assign Faculty Coordinators

EXTRA FEATURES

- FeedBack
- Download Schedule

Event Details

Event ID	Event Name	No. Of Participants	Operation
1	Inaugration	0	-
2	Academic Prize Distribution	0	-
3	Model Exhibition	0	-
4	Poster And Slogan Exhibition	0	-
5	Photography Exhibition	0	-
6	Skit	0	-
7	Technical Jewellery	0	-
8	Anand Mela	0	-
9	Rangoli	0	-
10	Face Painting	0	-
11	Mehandi	0	-
12	Nukkad Natak	0	-
13	Treasure Hunt	0	-

Fig 5.5 All Participation

Admin Panel

Welcome Kavita Upadhyay

GENERAL

- Home
- Events
- Schedule
- View Participation
- Assign Faculty Coordinators

EXTRA FEATURES

- FeedBack
- Download Schedule

More Features Coming Soon

ASSIGN FACULTY CO-ORDINATORS

SNo	Event Name	Faculty 1	Faculty 2	Faculty 3	Faculty 4	Check
1	Poster And Slogan Exhibition	Select Faculty	Select Faculty	Select Faculty	Select Faculty	<input type="checkbox"/>

Reset Submit

Powered By : Institute of Engineering & Science, IPS Academy Indore (M.P.)

Fig 5.6 Assign Faculty Coordinator

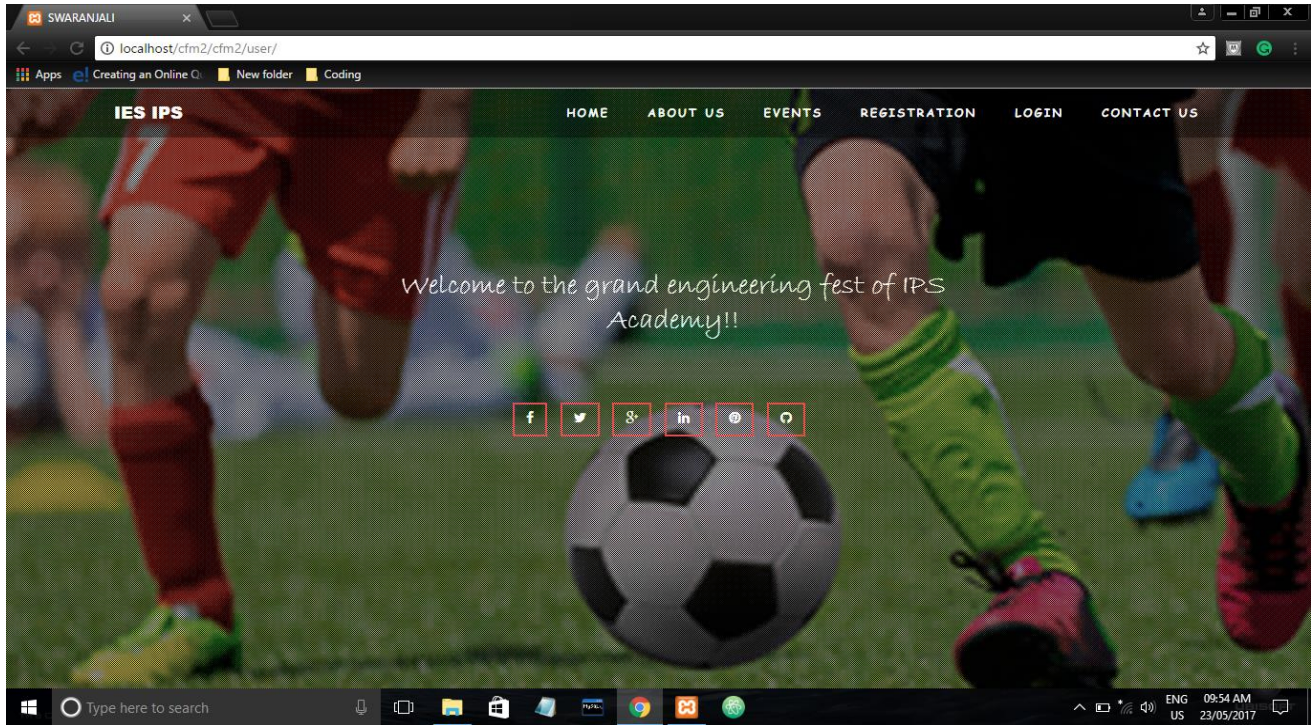


Fig 5.7 Website Home

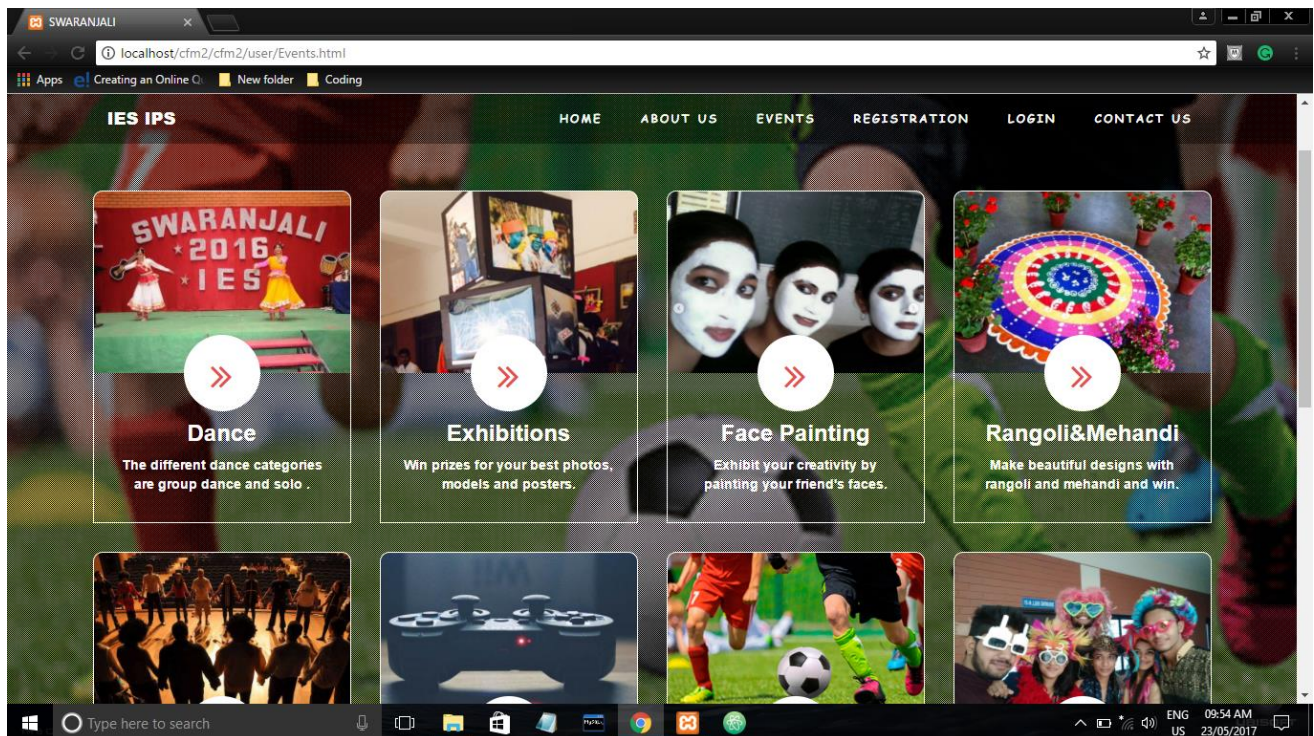


Fig 5.8 Event Details

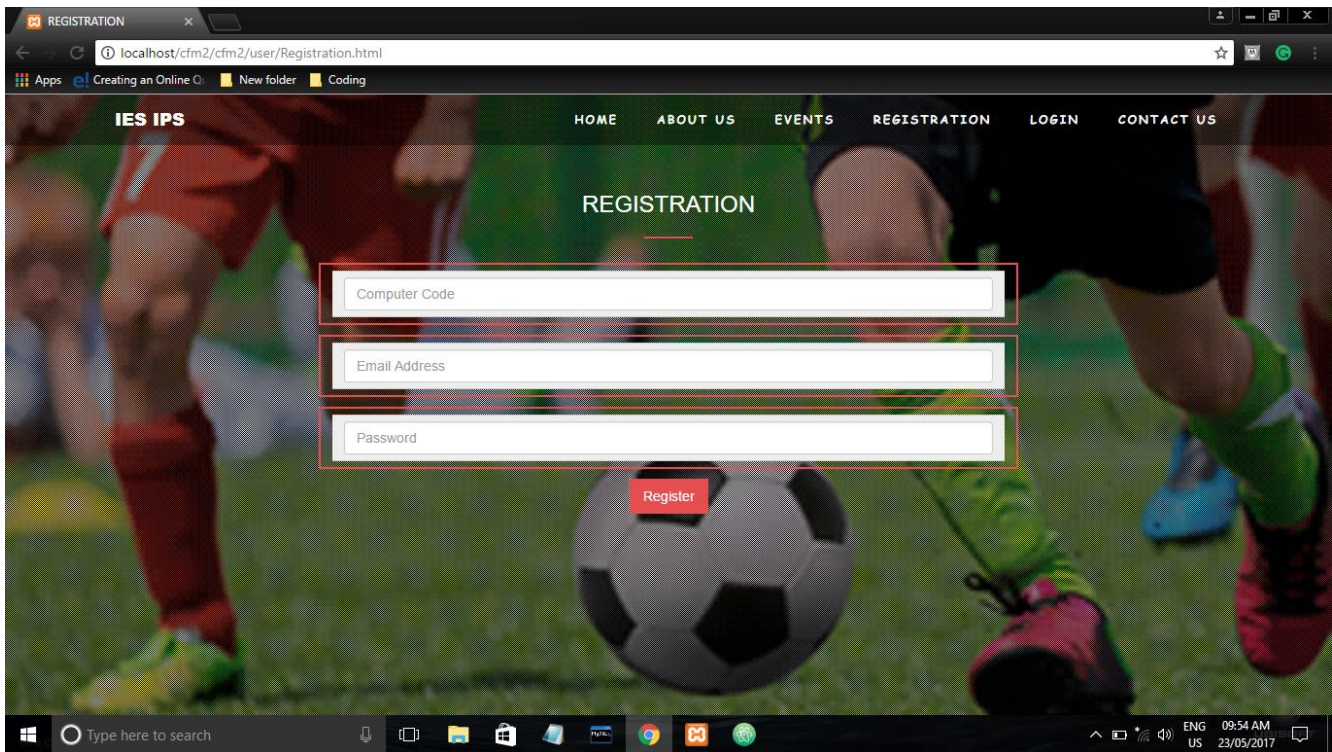


Fig 5.9 Student Registration

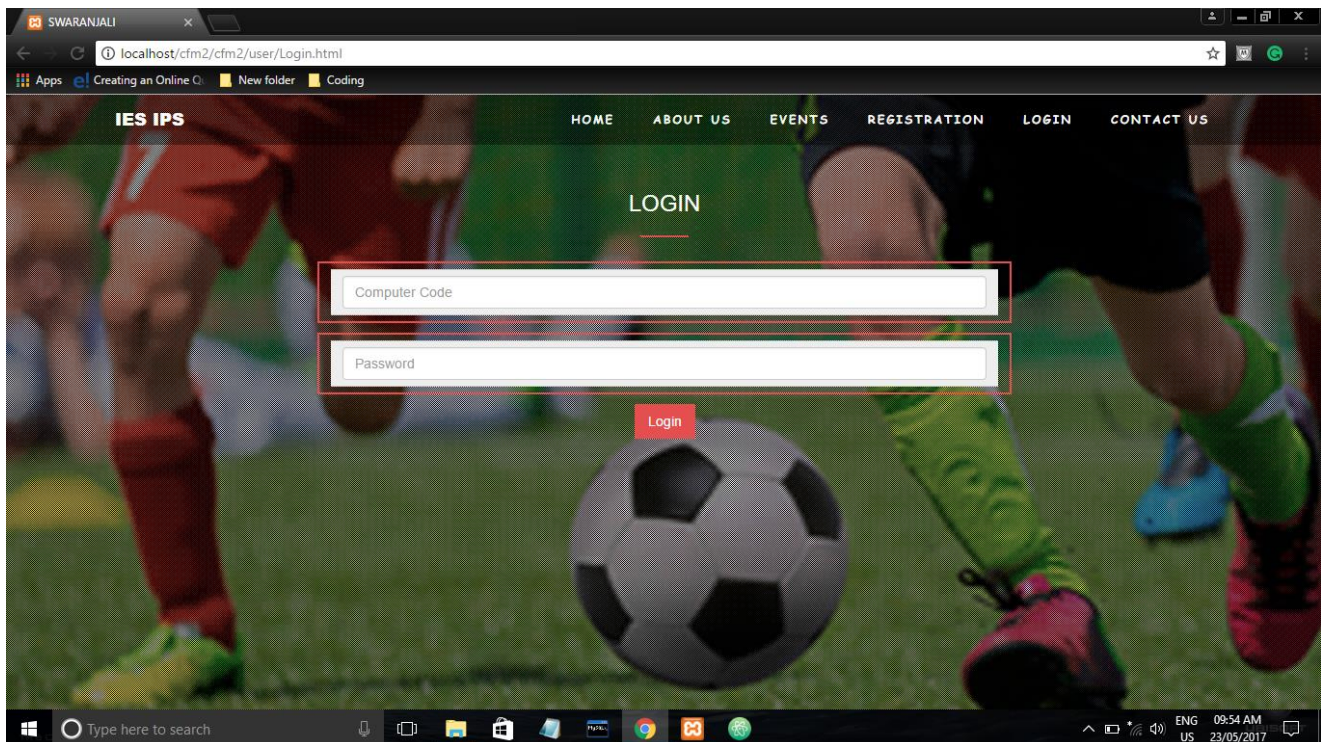


Fig 5.10 Student Login

CHAPTER-6

TESTING METHOD

6.1 Testing Method

Software testing is a critical element of software quality assurance and represents the ultimate review of specification's design, and coding. The point was kept in mind throughout the software development of Swaranjali Fest Management. Activity and a conscious effort were made to test the Swaranjali Fest Management system as thoroughly as possible. The objective behind this was to systematically uncover different classes of errors with a minimum amount of time and effort.

Unit Testing

During the implementation for the system, each module was tested separately to uncover errors within its boundaries.

Interface Testing

The overall strategy for interface testing is to:

- Uncover errors related to specific interface mechanisms. For e.g. errors in the proper execution of a menu link or the way the data is entered in the form.
- Uncover in the way the interface implements the semantics of navigation, web application functionality, or content display.

To accomplish this strategy, a number of objectives are achieved:

- Interface features are tested to ensure that design rules, aesthetics and related visual content are available for the user without error.
- Individual interface mechanisms are tested that are equivalent to unit testing.
- Each interface is tested to ensure that it performs the requisite task.

- The interface is tested within a variety of environments to ensure that it will be compatible.

Navigation Testing

- We ensured that the mechanisms that allow the web application user to travel through the web application are all functional
- Navigation links: Internal links within the web application tested to ensure that proper content or functionality is reached when the link is chosen.

Integration Testing

- It is systematic technique for constructing the program structure while at the same time conducting the test errors associated with interfacing. Top-down integration approach was carried out to leave processing system.

6.2 Test Case

A test case is a set of conditions or variables under which a tester will determine whether a system under test satisfies requirements or works correctly.

The process of developing test cases can also help find problems in the requirements or design of an application.

Table 6.1 TEST CASE TEMPLATE

Test Suite ID	TS001
Test Case ID	TC001
Test Case Summary	To verify that only authenticated users can sign up to the website.
Related	RS001

Requirement	
Prerequisites	1. User is authorized.
Test Procedure	<ol style="list-style-type: none"> 1. Enter the details in sign up form. 2. Respective computer code is cross checked in student database. 3. Click Register.
Expected Result	<ol style="list-style-type: none"> 1. The user is not the member of IPS Academy. 2. A message 'Please enter a valid computer code' should be displayed if the specified detail is invalid.
Actual Result	<ol style="list-style-type: none"> 1. If the specified quantity is valid, the result is as expected. 2. If the specified quantity is invalid, nothing happens; the expected message is not displayed.
Status	Fail
Remarks	This is a test case for testing of user authentication.
Created By	Neil Holkar
Date of Creation	02/05/2017
Executed By	Sakshi Ramdurgekar
Date of Execution	08/05/2017
Test Environment	<ul style="list-style-type: none"> • OS: Windows 10 • Browser: Chrome 30.0.1599

CHAPTER-7

CONCLUSION

The institution of IES IPS Academy organizes the annual event for its students .The main objective of conducting this event is to make the students unveil their skills and talents by letting them participate in the various events that are being held in the fest.

Our system will be a boon for the Institution.. It has been developed to be a great platform for the faculties and students involved in making the annual fest a success. It will make the eradicate the conventional method of managing the event manually and establish a newer way of managing the fest digitally.

The system has in total four admins which are Event Head, Department Head, Faculty Coordinator and Student Coordinator . These admins can login to their respective accounts and manage the whole event then and there . Apart from this a website will help the students to peep into all the details of the events and participate thereafter. Students have to register to the website for participating in any of the events.

Thus the system will be meeting the requirements of all the people involved in the management of the fest and also make their work all the more tangled and simpler.

CHAPTER-8

LIMITATIONS AND FUTURE ENHANCEMENTS

Limitations

The system assumes that the users to have the basic computer knowledge with access to system so he/she is not warned to make mistakes.

Design Constraints

1. Standard Compliance:

E-Commerce rules can be changed any time so it has the ability to overcome these changes. It follows all the rules of E-Commerce.

2. Hardware Limitations:

Minimum hardware requirements are at least 100 MHz processor and good internet connection.

3. Event Centered:

The software is centered for only one event of the college i.e. Swaranjali. Other events such as Voice of IES, ENVISAG are not included in the proposed system.

4. Mobile application of the project is not available till date.

Future Enhancement

Other events of IPS Academy will be added to the system. The usability of the system can be expanded in order to meet management of other cultural as well as technical events organized in IPS Academy. Thus the institution will be acquiring a complete system in future for the organization of events like Workshops, Seminars, Voice of IES, Plantation days, Envisage and also the events organized by various departments of the institution.

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