California State University
DOMINGUEZ HILLS

EVENT MANAGEMENT SYSTEM: GROUP NO 6

PART 3 SOFTWARE SYSTEM DESIGN

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1. Introduction

An event management system is used to plan and schedule the activities required to organize an event or events. It is an automated system that provides strategic schedule to organize the event in a smooth way. It has been developed to overcome the problems that prevail in a manual system to manage the evets which is very tedious. It eliminates the problems and obstacles that are faced in the existing system.

It manages all the statistical data and provides analytical status of the processing of events with maximum utilization. It has the ability to manage multiple events, host events at multiple locations and allows remote clients to make registrations online.

In this part of the project plan we will explain in detail with the help of UML diagrams the various modules used in the system

It is designed in such a way that is assists the various entities using the system are equipped with the optimum amount of information and manage the event.

The system is error free, reliable and helps the user to organize the event rather than focus on the keep record of the data. This helps the user to concentrate on the activities of organizing the event rather than maintaining records. Therefore, the system ultimately allows you to manage the resources of the event efficiently. Thus, the event management system focuses on better performance and providing better services to the clients.

2. Context Model

A system context model is a structural model that demonstrates the other systems that are present in the environment of the system being developed.

Context models simply show the other systems in the environment, not how the system being developed is used in that environment.

The system being developed:

- **Event Management System**

Systems in the environment:

- **Admin Module**: The admin/developer of the system is fully authorized to take actions
- **Login Module**: Module for the users to Login/Signup to the system
- **User Module**: There are two users of this system- Organizer & Attendee

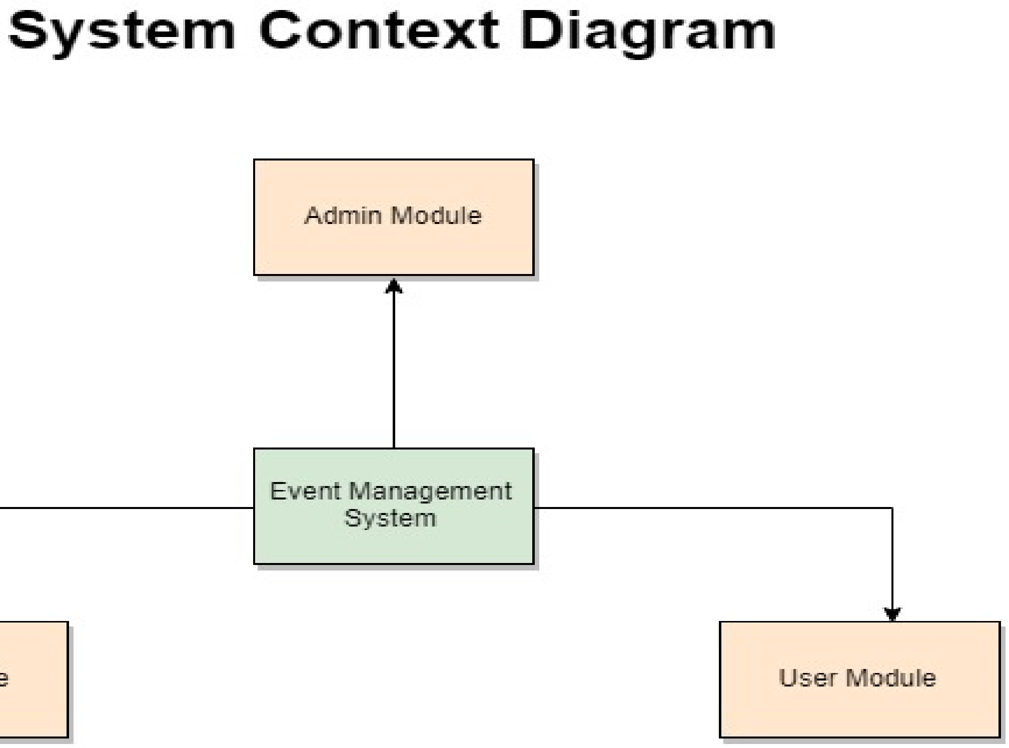


Figure 2.1: System Context Model

Interaction Models

An interaction model is a dynamic model that shows how the system interacts with its environment as it is used – illustrating the communications between the system being developed and the associated systems.

In the event management system, the major interaction takes place between the system and the components of the user module i.e. Organizer and Attendee. The system acts as a medium of interaction between the organizer and the attendee

Interactions between the system and organizer include:

- Detailed information of the event
- Creating an event
- Send invites
- Generating reports after the events

Interactions between the system and the attendee include:

- Send invites
- Accept/decline invites
- Add Suggestions

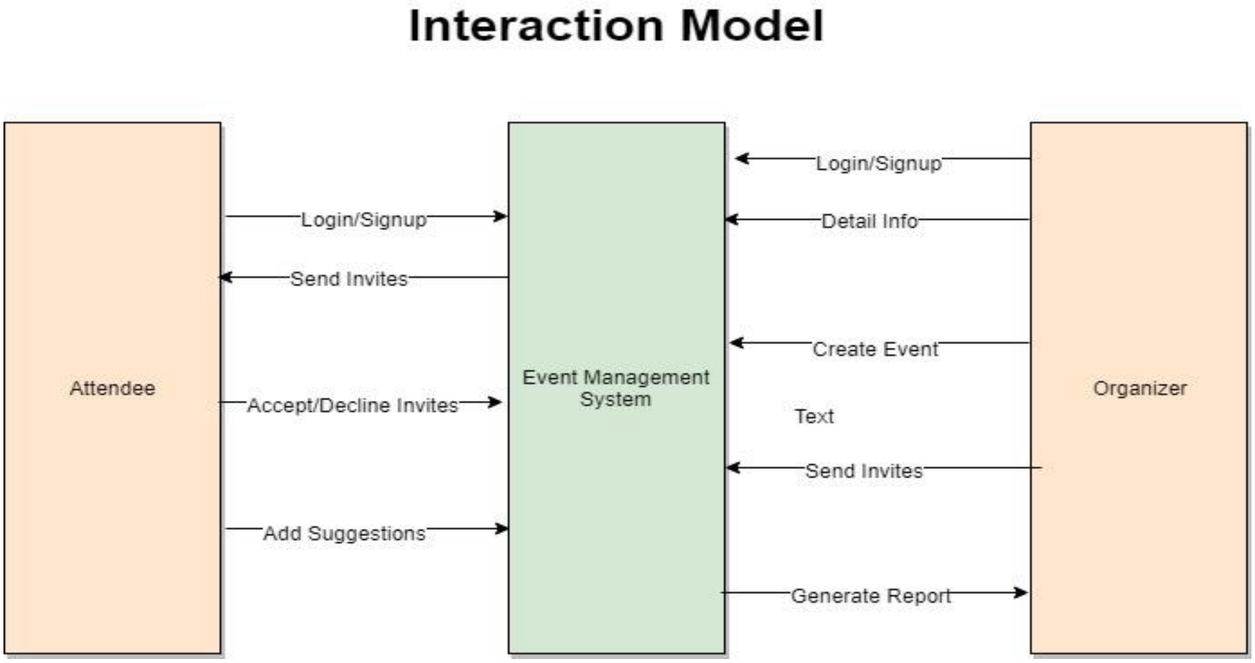


Figure 2.2: Interaction Model

3. Use case model

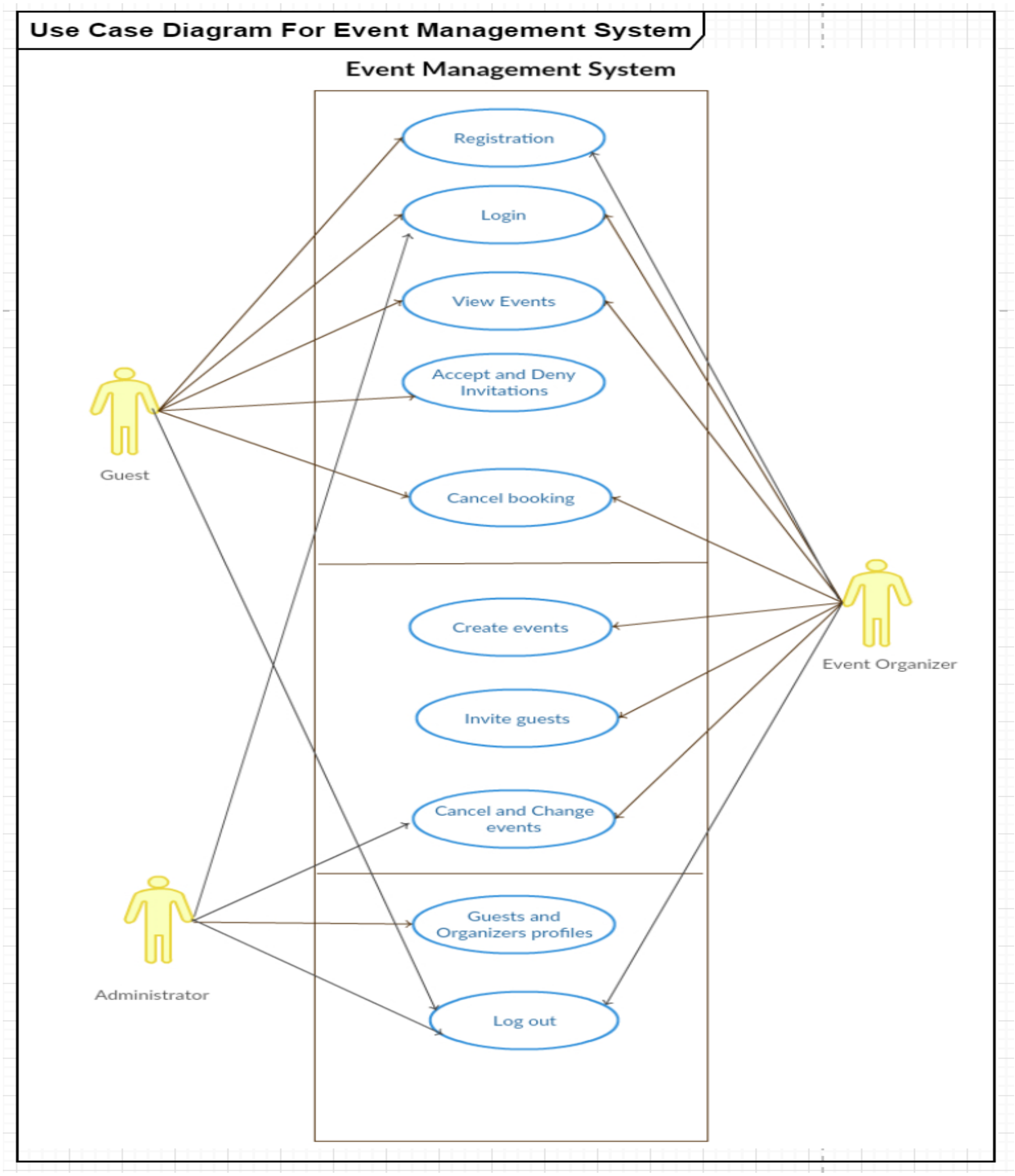


Figure 3: Use case diagram for event management system

- **Description:** This use case describes an overview of Event Management System (EMS) where there are three actors each playing different roles in this system. The basic idea of this use case is carrying out different tasks for different actors according to the functional requirements. For example, according to the above diagram Administrator has the access to all the profiles of guests and organizers where both of the other two actors do not have the access, in other case all three actors can be logged out of the system.

- **Goal:** The basic business goal of the system is to perform with ease when all the actors try to access the system, where it should provide the guest to get access to his home page and search, accept and deny his desired events and when a user is logged in a as a event organizer then the system be able to provide access to create events and invite guests to these events.

- **Preconditions:**
  1. To the access the system one must have internet access.
  2. Any actor must open the designated website to access the system according to the use case.

- **Actors:**
  1. Guest
  2. Event Organizer
  3. Administrator

- **Basic Course:**
  1. Use case begins when any of the actors try to access the system by logging in or by registration.
  2. If actor Guest tries to access he must register or login at first then the guest can view, accept and deny invitations and can also cancel the booked events.
  3. If actor Event organizer tries to access he must register or login as an organizer at first then the event organizer can create events and invite guests and can also change and cancel the events.

4. If actor Administrator tries to access he must login as admin at first then the admin can access to guests and organizers profiles and can also change and cancel the events.
5. Use case ends when any of the actors log out of the system.

- **Included use cases:**

1. This use case includes the use case for the guest to access the system.
2. This use case also includes the use case for the event organizer to access the system.
3. This use case also includes the use case for the administrator to access the system.

4. Architecture design and specification

The main function of the system is to help users to organize an event or attend it. Hence the system is divided into four modules as follows,

1. **Event Management Module:** This module will be used to manage the entire system
2. **Login Module**: It is used to manage the login details when the user logs on the system.
3. **User Module**: The user module is used to manage the users logging on to the system it is divided into two
   - **Attendee Module**: The user in this module can accept or decline an invitation. He can view the past and the upcoming events and give suggestions and feedback for the event attended.
   - **Organizer Module**: The user in this module can create and schedule an event. He can send out invitations to the guest keep a record of the attendance. He can retrieve cancel or change events he may be able to generate monthly reports of the conducted events.
4. **Admin Module**: The admin or the developer has full authority over the system he can view or delete the registered users and he can edit and update the data.

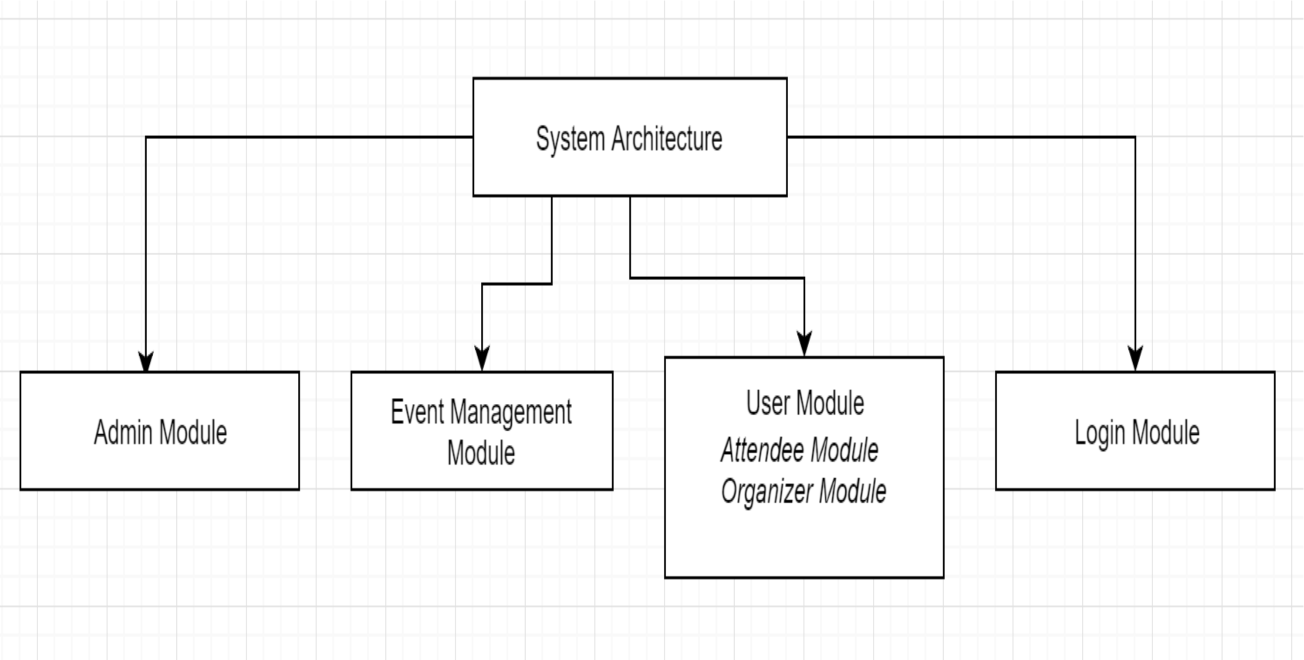


Figure 4.1: Basic System Architecture

4.2 High-Level Overview of System Architecture

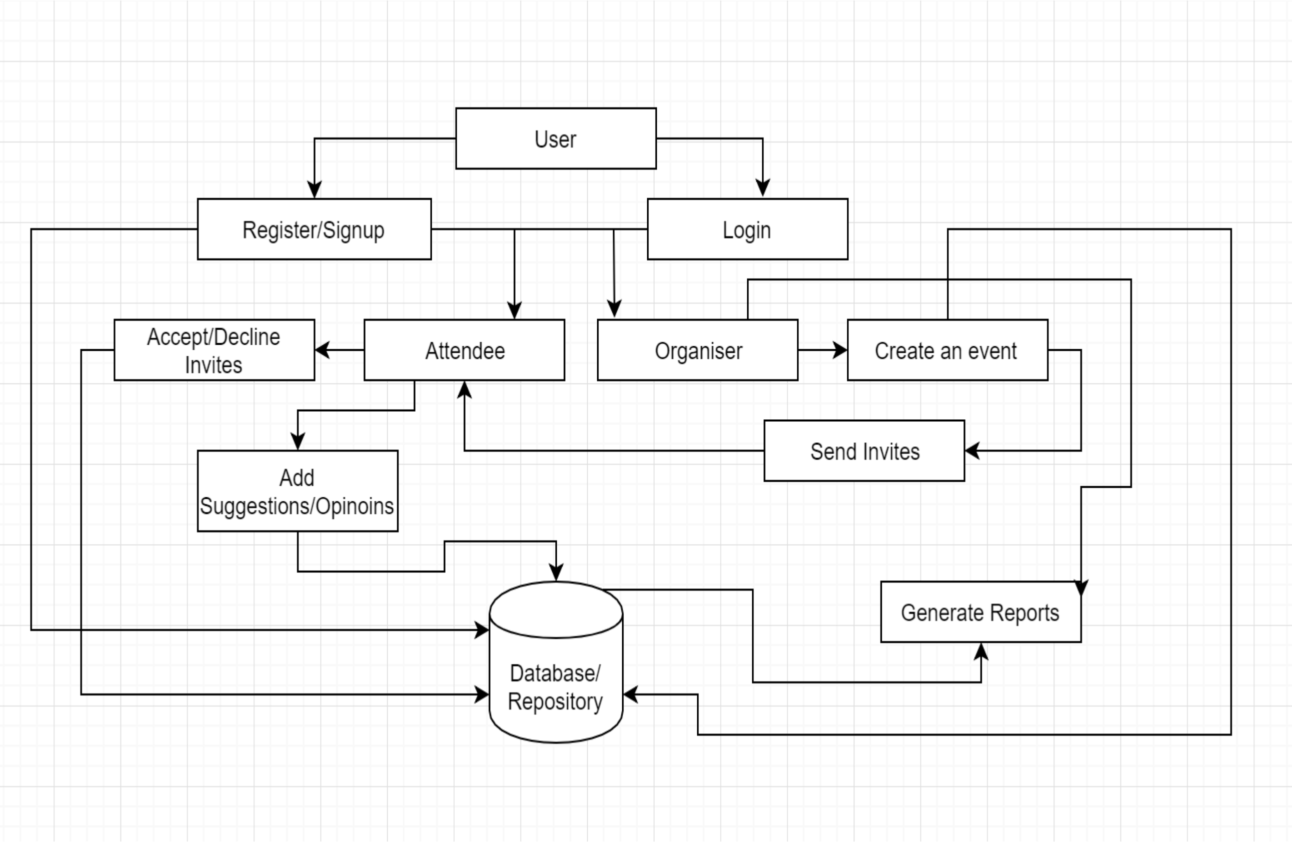


Figure 4.2: Overview of System Architecture

The above high-level view of the architecture shows the various functions of every module that is being used in the system.

In our project we will be using the MVC architecture, as mentioned in part one of the project proposal.

The Model View Control (MVC) is the most popularly used software design pattern for the development of web applications. The MVC consists of the following three components:

- **Model:** Lowest level of the pattern which is responsible for maintaining the data.
- **View:** Responsible to display all the data in the various views to the users.
- **Controller:** Responsible for manipulation of the data between the Model and the view

The controller receives the incoming requests from the client and co-ordinates with the Model to get the data required by the View. The View is responsible for generating a presentable response to the user.

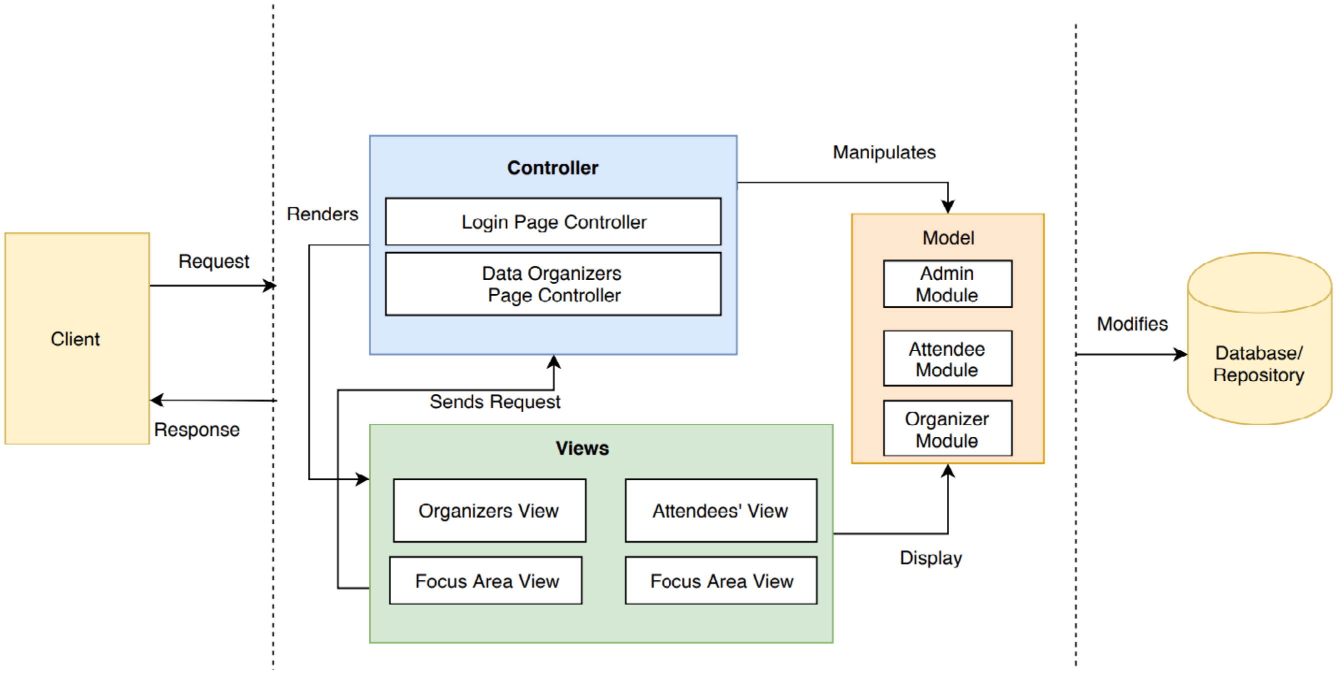


Figure 4.3: System Architecture for EMS using MVC-Model View Controller Design

5. Class design

Class Diagrams are one of the UML Diagrams that are used to show the classes in a system and the relationship between these classes. A class diagram has three sections: Class name, attributes and operations (methods).

In the Event Management System class diagram, there are five classes namely:

- User Class
- Attendee Class
- Organizer Class
- Admin Class
- Event Class.

Attendee class, Admin class and Organizer class are inherited from User class as they are inheriting the functionality of User class, i.e

User of the system can be an Admin, an Attendee of the event or an Organizer of the event. The '*' symbol near the Attendee class and Organizer class indicates that there can be many attendees and organizers.

There can be only one Admin, hence '1' near Admin class. The '*' near Event class indicates that a user can be part of many events.

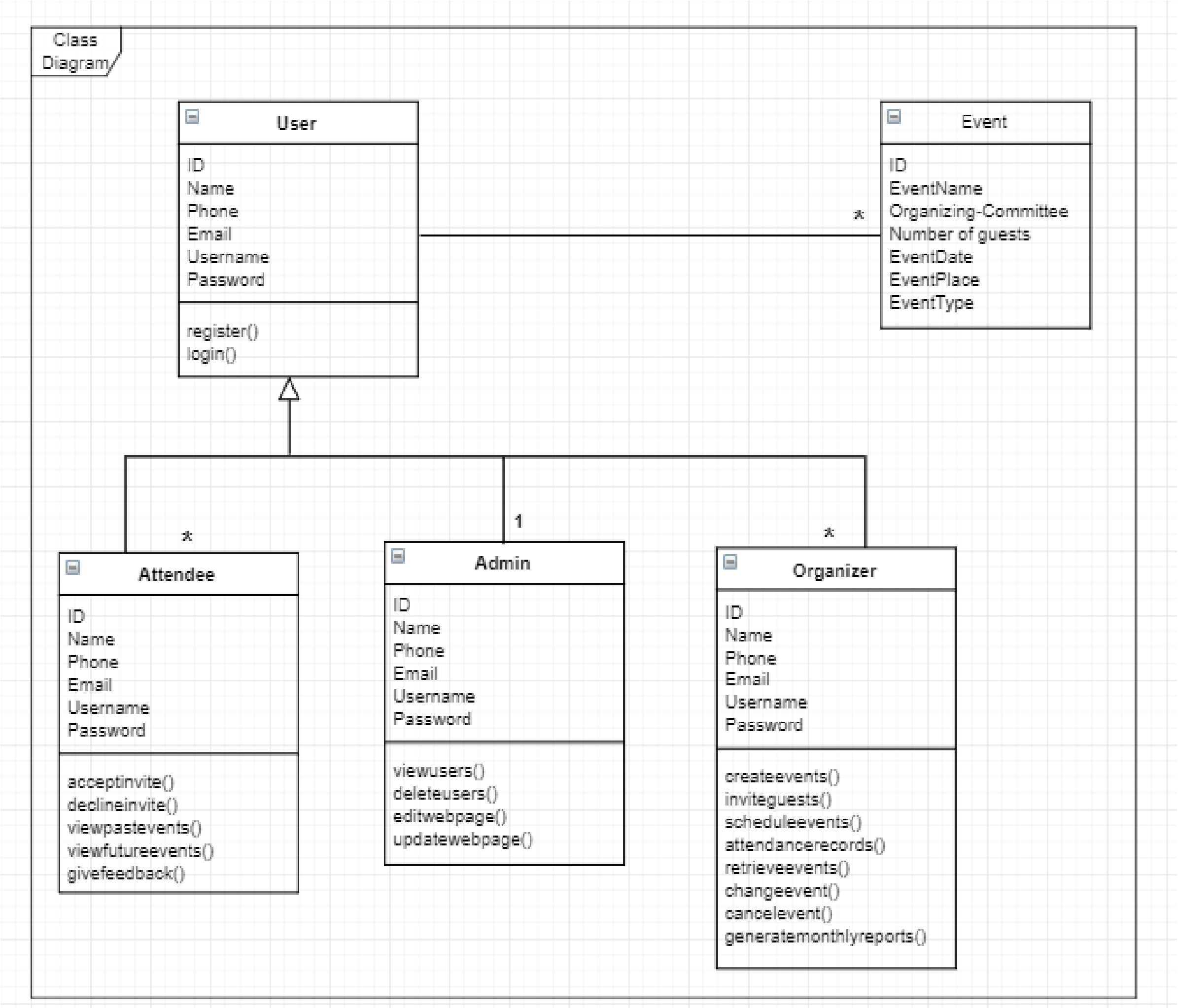


Figure 5: Class Diagram for event management system

6. Sequence diagrams

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.

Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called **event diagrams** or **event scenarios**.

A sequence diagram shows, as parallel vertical lines (*lifelines*), different processes or objects that live simultaneously, and, as horizontal arrows, the messages exchanged between them, in the order in which they occur. This allows the specification of simple runtime scenarios in a graphical manner.

Here are few examples of sequence diagrams

- The Event organizer can go on the web and request access from web server.

    1. Access is granted by the web server to the Event organizer
    2. When the access is given by the web server the Event organizer can enter details and Request access of the data and can save the data in the database
    3. Once data is saved in the database the Event organizer can come back later and login
    4. For login the Event organizer has to enter login details which will be retrieved by the web server and validated from the database.
    5. Once access is given to Event organizer, he can create an event on the website and implement and update the event
    6. Event organizer can also change events and also cancel events which can be updated in the database.

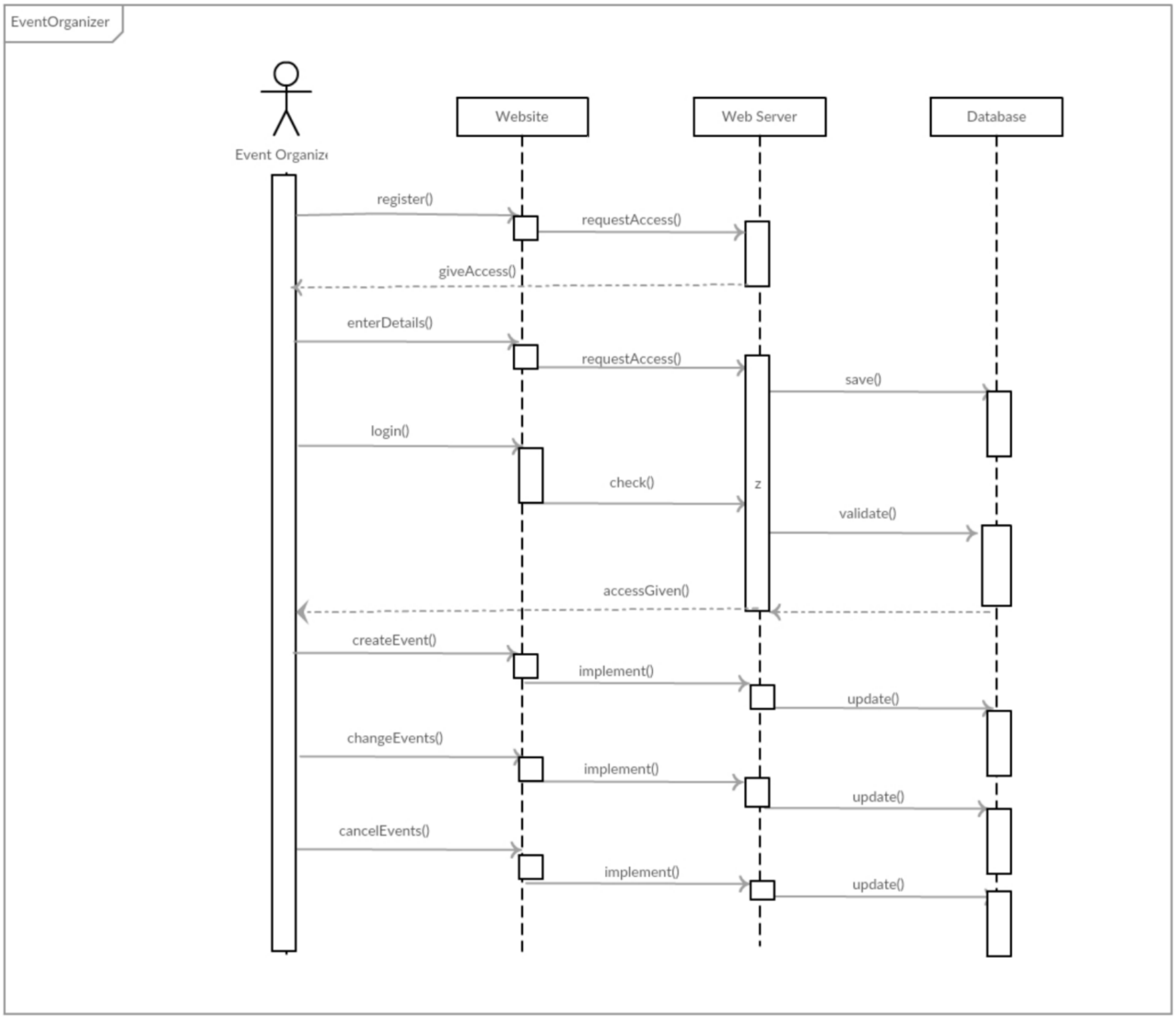


Figure 6.1: Sequence Diagram for event organizer

1. Administrator can have access to all the data where he can view guests, events and all other data
2. For that Administrator has to login on website and data will be validated in the database and access is granted. Once access is granted Administrator can look up for guests and data will be retrieved from the database and can also view events
3. Administrator has the access to change events and implement it on the data base and can also cancel the events which will be implemented in the database

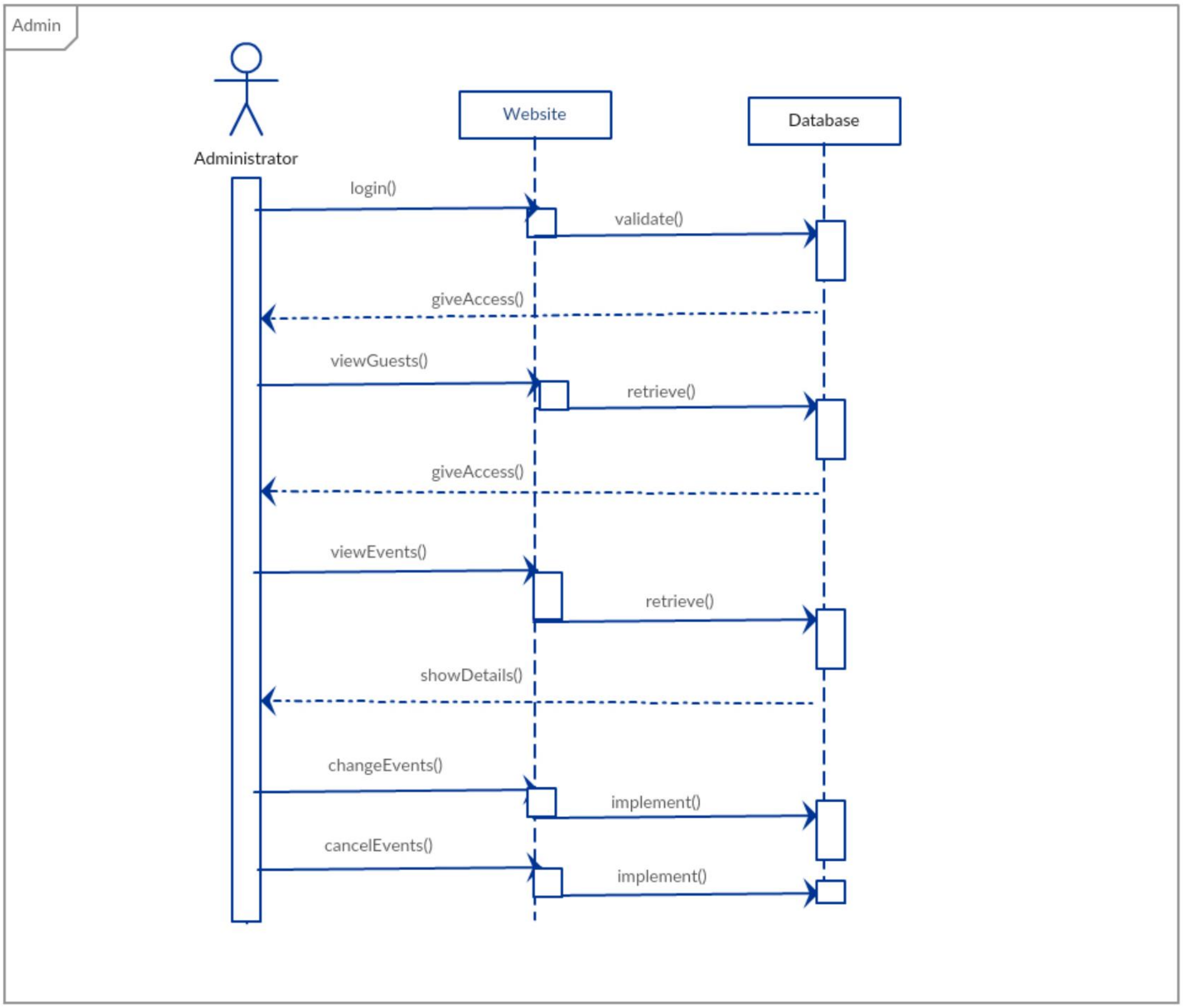


Figure 6.2: Sequence Diagram for admin

1. The guest can go on the web and request access from web server.
2. Access is granted by the web server to the guest
3. When the access is given by the web server the guest can enter details
4. Request access of the data and can save the data in the database
5. Once data is saved in the database the guest can come back later and login
6. For login the guest has to enter login details which will be retrieved by the web server and validated from the database.
7. Once data is validated guest will have access to data on the web server and guest can look for events on the web server and can make bookings from the website and if guest would like to cancel the booking if the guest wishes so

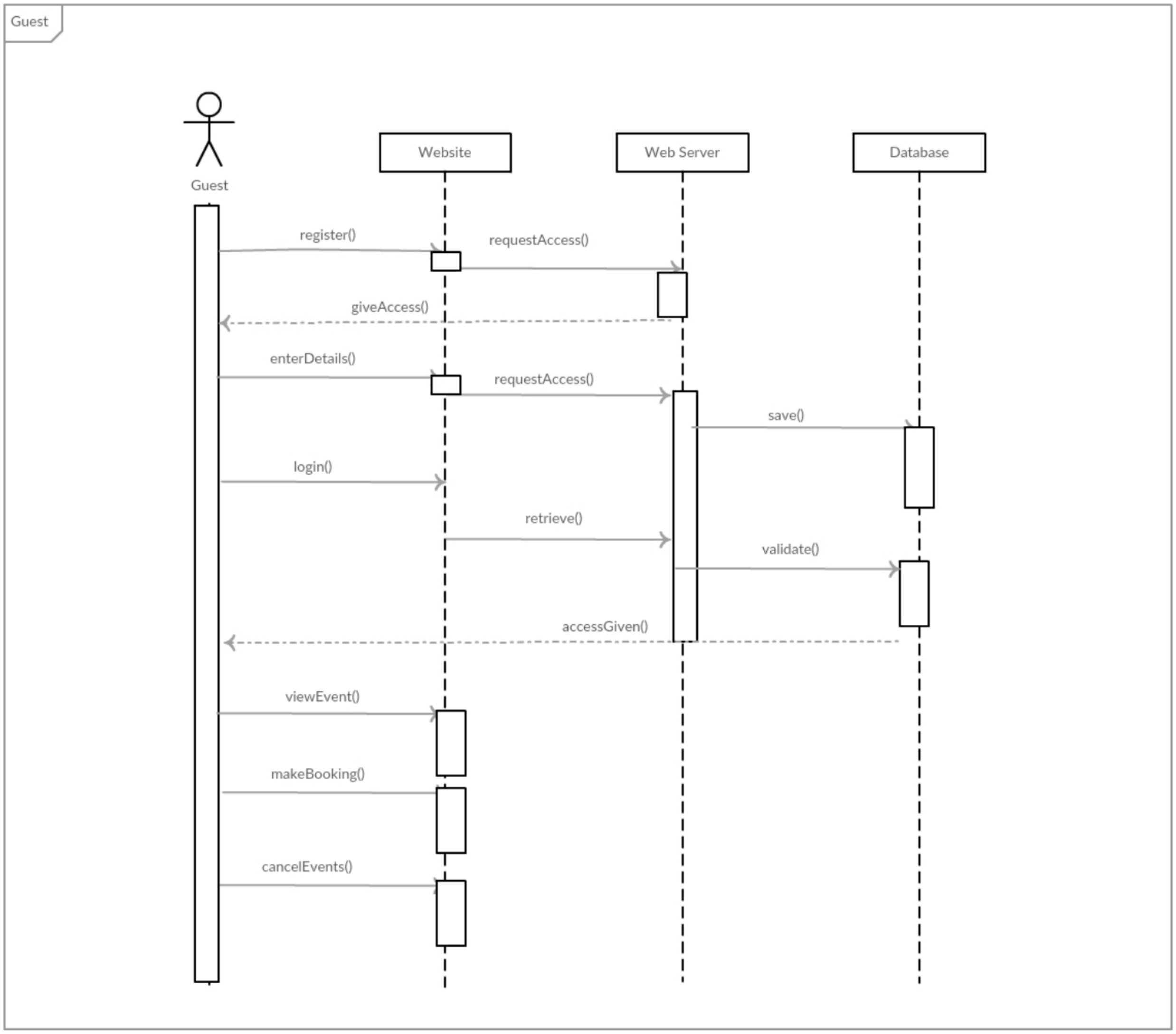


Figure 6.3: Sequence Diagram for guest/Customer

7. User interface design

User interface design is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices with the focus on maximizing usability .

- It is used to design the looks and styles in the interface for the software product.
- The primary goal of user interface design is to make user interaction simple and efficient enough that he likes to use and work on the software.
- It is also useful in maximizing the user experience by providing different interfaces to different functions.
- An ideal user interface should have balanced technical functionality and visual effects.
- Today user interface is involved not only in computer systems but also in cars and airplanes providing better visual experience and usability to user.

User interface design has many different phases:

- **Functionality requirements gathering**
- **User and task analysis**
- **Information architecture**
- **Usability inspection**
- **Graphical user interface design**
- **Software Maintenance**

User interface design are done in many ways it links the interface and functional requirement of objects.

- Cascading style sheets.
- HTML.
- XML.
- Bootstrap.
- jQuery.
- JavaScript.

We have used the following techniques in Project

1. **Cascading style sheets (CSS)**

- CSS is used to design the interface and its formatting, describing the presentation.
- It is also used to separate the presentation of the content like layouts, colors, fonts, background.
- It is every efficient.
- Provides more flexibility and accessibility.
- It has good separation of content presentation, good bandwidth, user friendly, Page reformatting and etc.

2. **Bootstrap**

- It is open source front end framework for designing the user interface.
- Bootstrap contents the html and CSS templates and along with it it has various forms and buttons.
- Bootstrap support every browser like safari, google chrome, internet explorer, Mozilla Firefox and so on.
- Bootstrap4 uses SaaS instead of stylesheets.
- Bootstrap has reusable component which is its beauty.

3. **JavaScript**

- It is a high level, interpreted programming language.
- JavaScript is language which is also referred as dynamic, weakly typed, prototype-based language.
- It enables interactive web pages.
- As JavaScript is multi paradigm it is event driven, functional and imperative Programming language.
- It is implemented on both client side as well as server side in web browser.

Control Classes of the Screen:

The **Control Class** gives information about the user interface properties and behaviors of a **control**. The Control classes are closes associated with the data types we generally use check boxes for it. However, we are using radio buttons for the selection of various options on the form of the website

Screenshot of our User Interface using CSS and Java

Start Page of the website

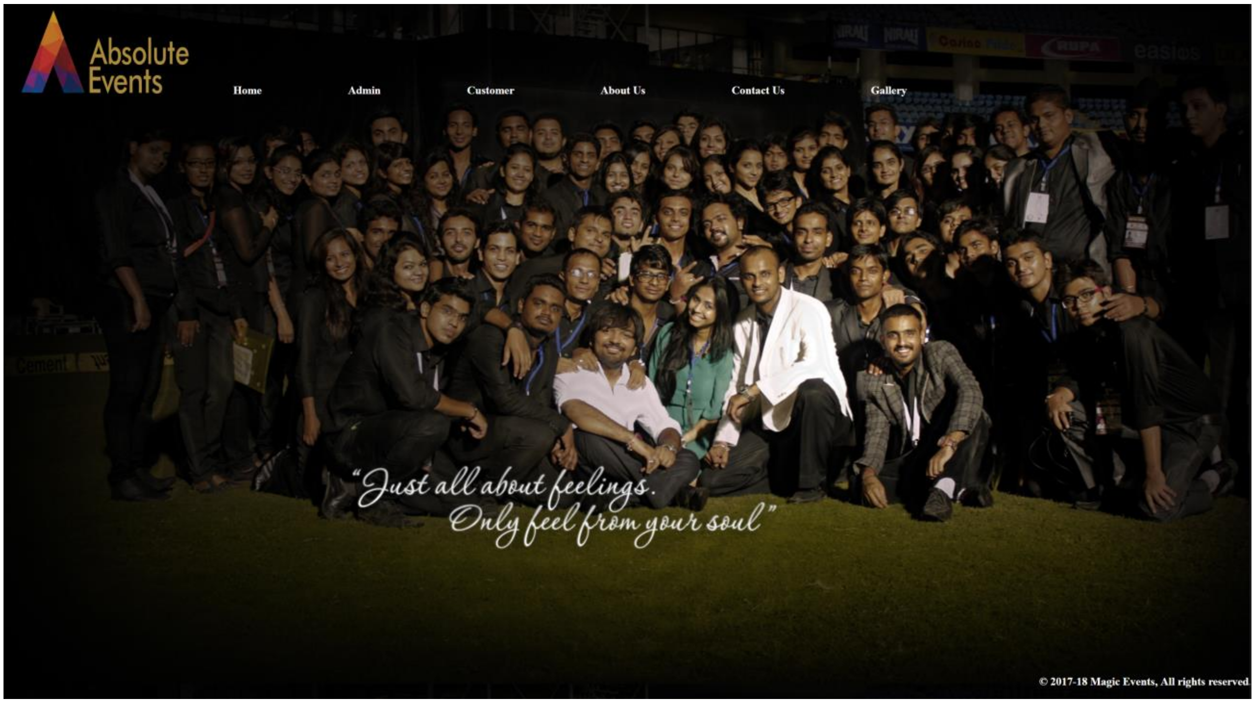

Absolute Events
Home
Admin
Customer
About Us
Contact Us
Gallery
"Just all about feelings. Only feel from your soul"
© 2017-18 Magic Events, All rights reserved.

Figure 7.1 User interface Design 1

Admin Module Of the website

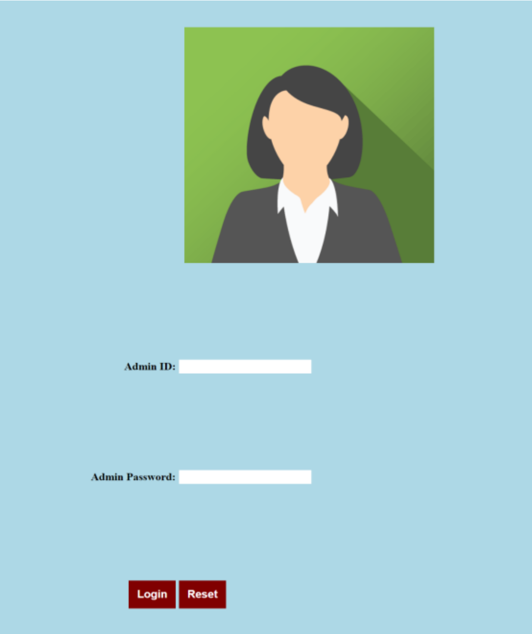


Figure 7.2 User interface Design 2

Costumer Module of the website

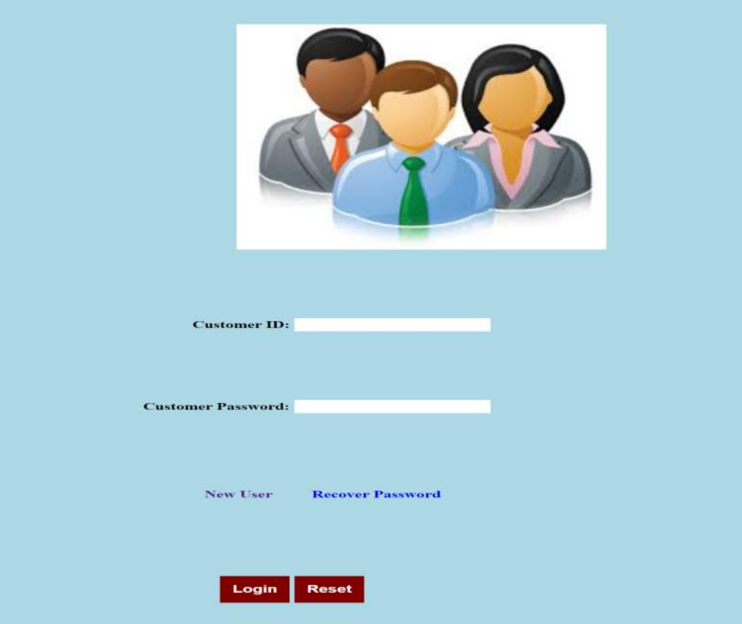
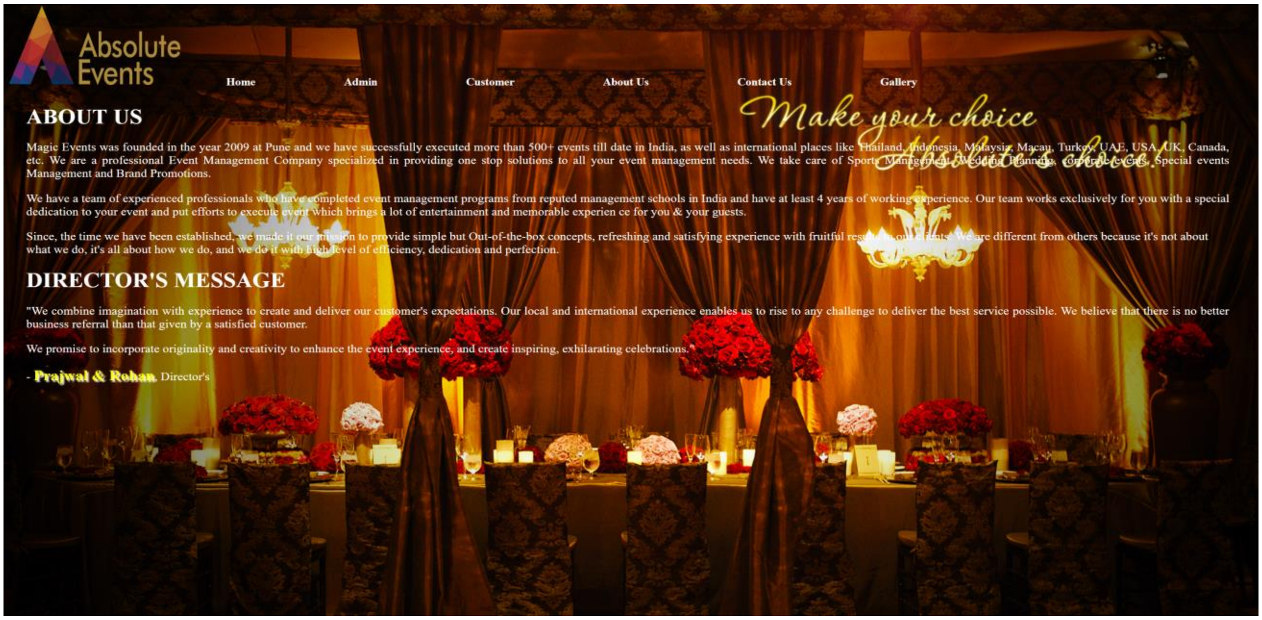


Figure 7.3 User interface Design 3

Screenshot of About Us Page of the website



ABOUT US

Magic Events was founded in the year 2009 at Pune and we have successfully executed more than 500+ events till date in India, as well as international places like Thailand, Indonesia, Malaysia, Macau, Turkey, UAE, USA, UK, Canada, etc. We are a professional Event Management Company specialized in providing one stop solutions to all your event management needs. We take care of Sports Management, Wedding Planning, corporate events, Special events Management and Brand Promotions.

We have a team of experienced professionals who have completed event management programs from reputed management schools in India and have at least 4 years of working experience. Our team works exclusively for you with a special dedication to your event and put efforts to execute event which brings a lot of entertainment and memorable experien ce for you & your guests.

Since, the time we have been established, we made it our mission to provide simple but Out-of-the-box concepts, refreshing and satisfying experience with fruitful results in our clients. We are different from others because it's not about what we do, it's all about how we do, and we do it with high level of efficiency, dedication and perfection.

DIRECTOR'S MESSAGE

"We combine imagination with experience to create and deliver our customer's expectations. Our local and international experience enables us to rise to any challenge to deliver the best service possible. We believe that there is no better business referral than that given by a satisfied customer.

We promise to incorporate originality and creativity to enhance the event experience, and create inspiring, exhilarating celebrations."

- **Prajwal & Rohan**, Director's

Figure 7.4 User interface Design 4