Department of Software Engineering

SWE 431:Thesis/Project

Project Documentation

Project on: Online Auditorium Booking System

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A Project submitted in partial fulfillment of the requirement for the degree of Bachelor of Science in Software Engineering

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APPROVAL

This **Project/Thesis** titled "**Online Auditorium Booking System**", submitted by **Abdullah Al Noman**, **ID:151-35-1111** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Software Engineering and approved as to its style and contents.

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It hereby declares that this project has been done by me under the supervision of Ms. Tapushe Rabaya Toma Lecturer, Department of Software Engineering, Daffodil International University. It is also declared that neither this project nor any part of this has been submitted elsewhere for award of any degree.

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Chapter 1

Introduction

1.1 Overview

The report cover Seven Chapters and appendices. Software Requirement Specification describe in second chapter and System Analysis describe in third chapter. These chapter refers details and description of the system. In the fourth chapter describe an overview of design & development. Fifth chapters will discuss the System Testing using data into the system. User manual will show in sixth chapter. In Seventh chapter discuss about project brief.

1.2 Purpose

The objective of the project Auditorium Booking System is to simplify booking and knowing about all auditorium in under this project using online devices like Computer, Smartphone, and Tablet etc. A person thinking about the auditorium booked is an easy process as well as without any hassle using electric devices and with having account card from any corner of Bangladesh at any time of the day. It is convenient for user as he do not have to actually visit the place. This system is effective and saves time and cost of the users.

1.2.1 Background

According to my knowledge, some software firm developed Auditorium/Hall Booking System. But still have no fully booking with Payment System Web Application for Auditorium Booking System. That's my inspiration for develop a fully payment system with booking Auditorium Booking System.

1.2.2 Project Goals

The basic functionality of this system is making the process user friendly for any user. It helps users to always get verified & accurate timing for choose an event. The main purpose of this project is to reduce time and make a reliable system. By using this system, user can get easily booked an Event.

1.3 Stakeholders

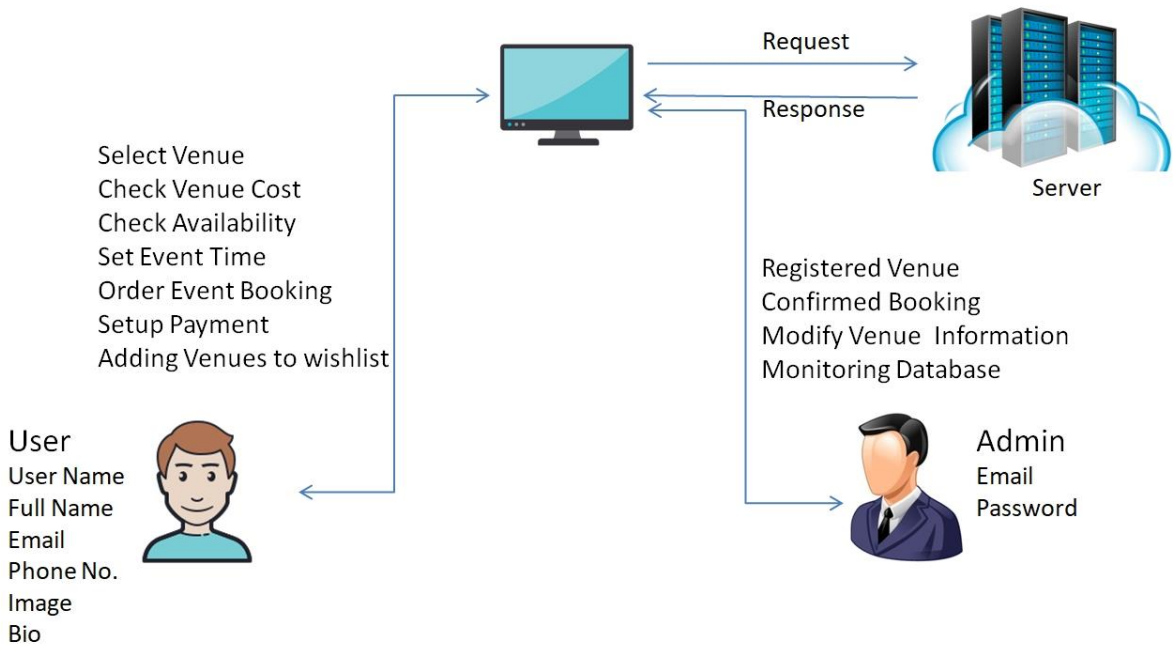
User is stakeholder of this project indirectly. Everyone can visit this web application & if anyone needed he/she can check schedule & book the Auditorium. Admin is the Authorize user of this project.

1.4 Project Schedule

The duration of this project is five month. I am working very attentively to finish this project within its duration.

Weeks Works	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Analysis Phase																		
Feasibility Study																		
Project Proposal																		
Project UI																		
Mid-Term Defense																		
Implementation of the Project																		
Testing																		
Documentation of the Project																		
Final Defense																		

1.5 Proposed Model



Chapter 2

Software Requirement Specification

2.1 Fundamental Requirement

This is a Business web Application. Time Schedule maintains is the core requirement of the project. From this project everyone can view or book for any kind of program or event.

2.1.1 Functional Requirements

Requirement &Validation:

Requirement	Login & Signup
Description	User & can Login in the Software. If he/she unregistered user then need to Signup first. Admin can Login in the Software Administration panel.
Stockholder	User, Admin.

Requirement	Check Event
Description	After Login User & can Check Events for booking.
Stockholder	User.

Requirement	Request For Booking.
Description	If Events are available user can request for booking an Event.
Stockholder	User.

Requirement	Approve/Disapprove Request.
Description	If events are available Admin Confirm Booking Request.
Stockholder	Admin.

Requirement	Email Notification.
Description	If Admin Confirm request then User get an email Notification.
Stockholder	User, Admin.

Requirement	Payment for Booking
Description	User Confirm payment for Booking.
Stockholder	User, Admin.

2.2 Data Requirements

There are limited data is required for this project. We can divide an event by slot& Need to show which slot are book or available etc. Need accurate data for every event.

2.3 Security Requirements

No	Description	Priority
AR01	Users need to be login first to Booked an Event.	Medium
AR02	Only Administrative authority will be able to enter the system to make maintenance.	High
AR03	User's boundaries shouldn't be within the system	Low

2.4 Precision or Accuracy Requirements

All these data update by authentic source. Duplication, harmful data are not used in this project. Because User are need accurate data for booking auditorium.

2.5 Dependability Requirements

Trust worthiness prerequisite is an estimation of framework dependability and upkeep. All the requirements are reliable. Server is in safe place. So it's ensuring safety.

2.6 Usability and Human-Interaction

This web Application is very user friendly. Everyone can easily use this Application. Even Non-technical user has ability to use this application & can easily book this system.

2.7 Accessibility Requirements

Normal user have not accessibility into Database. Only Administration have right to access into Database. Authentication is must to access into the system.

2.8 Capacity Requirements

T.**No**	**Description**	**Priority**
CR01	The Web application size must able to load at hosting site.	Medium
CR02	The database size must be able to store the system data.	Low
CR03	This web application System should support 10k user at the beginning. version.	Medium
CR04	System should support 1000 request per second.	Medium

Chapter 3

System Analysis

3.1 Use Case Diagram

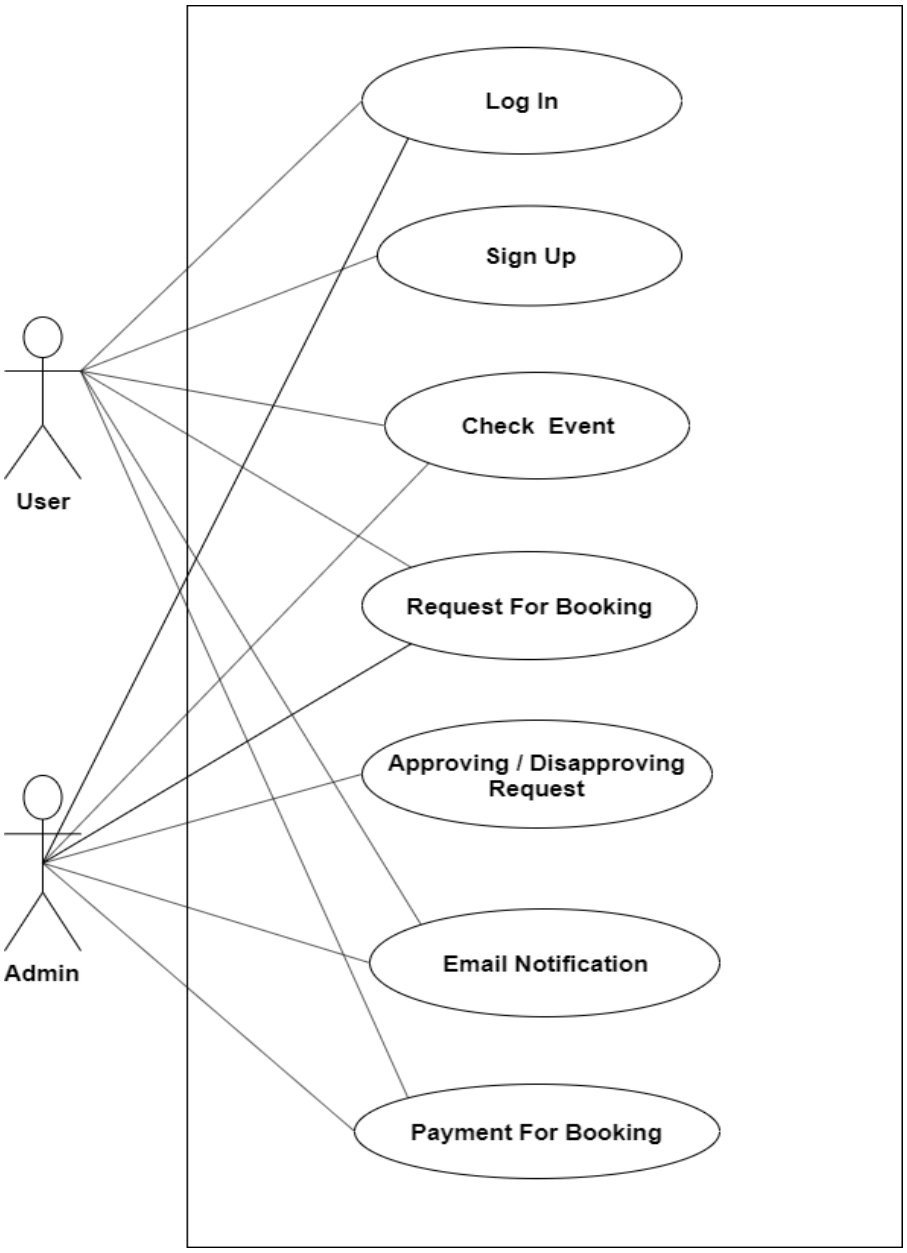


Figure 3.1: Use Case Diagram

3.2 Use Case Description

There are six use case descriptions in above use case diagram. Every use case is more important use case which actor is User who Can Check Event Request for Booking & Payment for Booking &another user who is admin need to 1st Login or Sign-Up then can check booking request & can approve/disapprove request, if approve he/she can request for payment.

3.2.1 Login

Use Case Name:	**Login**
Actors	User, Admin
Preconditions	User have a valid registered account
Post Condition	Successfully login to system.
Primary Scenario	Access login page Enter valid email and password
Trigger	User click to login button then he booking an event and he can pay for and event. When Admin login successfully he can see Administration Panel.

3.2.2 Check Event

Use Case ID	01
Use Case Name	Check Event
Primary Actor	User
Secondary Actor	None
Goal in Context	Get a set of Events
Precondition	Must need to access internet connection.
Scenario	1. Launch the web application. 2. Get a set of Events
Exception	Without internet you can't launch web application.
Priority	High
Frequency of Use	Just go to the website & get a set of events.

3.2.3 Request for booking

Use Case ID	02
Use Case Name	Request for booking
Primary Actor	User
Secondary Actor	None
Goal in Context	Select an event for booking.
Precondition	Must need to access internet connection.
Scenario	1. Launch the Web Application. 2. Get a set of Events 3. And Select an Event for Booking.
Exception	Without internet you can't launch web application.
Priority	High
Frequency of Use	Just go to the website & get a set of events and Select an Event for book.

3.2.4 Approving / Disapproving Request

Use Case ID	03
Use Case Name	Approving/Disapproving Request
Primary Actor	User
Secondary Actor	Admin
Goal in Context	Selected Event Request for booking & Admin can Approving / Disapproving.
Precondition	Must need to access internet connection.
Scenario	1. Launch the Web Application. 2. Get a set of Events 3. And Select an Event for Booking. 4. Selected Event request for booking.
Exception	Without internet you can't launch web application.
Priority	High
Frequency of Use	Admin go to the website check request & give approving/disapproving.

3.2.5 Email Notification

Use Case ID	04
Use Case Name	Email Notification
Primary Actor	User
Secondary Actor	Admin
Goal in Context	Selected Event Request for booking & Admin can Approving / Disapproving and User get an Email Notification from Admin.
Precondition	Must need to access internet connection.
Scenario	1. Launch the Web Application. 2. Get a set of Events 3. And Select an Event for Booking. 4. Selected Event request for booking. 5. Get an email Notification form Admin for Approving/Disapproving request.
Exception	Without internet you can't launch web application.
Priority	High
Frequency of Use	Just go to the email& get approving / disapproving result.

3.2.6 Payment for Booking

Use Case ID	05
Use Case Name	Payment for Booking
Primary Actor	User
Secondary Actor	Admin
Goal in Context	Selected Event Request for booking & Admin can Approving/Disapproving and User get an Email Notification from Admin& Request for Payment.
Precondition	Must need to access internet connection.
Scenario	1. Launch the Web Application. 2. Get a set of Events 3. And Select an Event for Booking. 4. Selected Event request for booking. 5. Get an email Notification form Admin for Approving/Disapproving request. 6. If Admin approve then he/she also get an email for payment confirmation.

Exception	Without internet you can't launch web application.
Priority	High
Frequency of Use	Just go to the email & get an email for payment confirmation.

3.3 Activity Diagram

We show in activity diagram how to work our project. We describe each of use case like Check Events, Request for booking, Approve / Disapproving Request, Email Notification &Payment for Booking. These diagram will show working process to user.

3.3.1 Activity Diagram (Login/Signup for User)

In this activity diagram we show that the user login procedure. For system login, if he/she Register user first enter his/her username and password. If enter valid email & password, then the system show login successful. Otherwise you will need to be registration first then go to login option again.

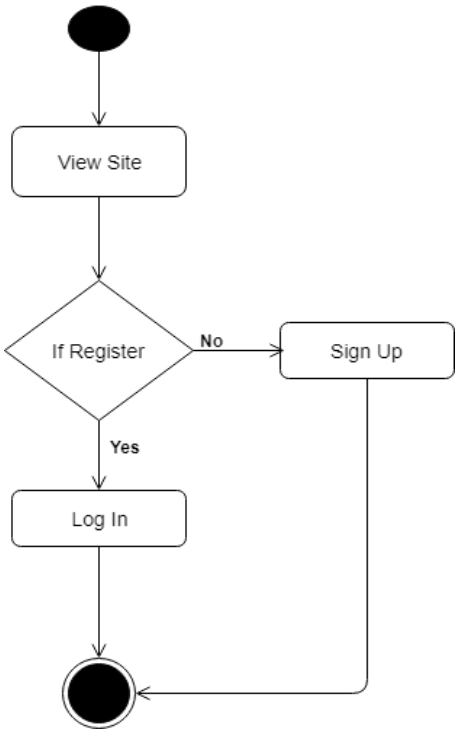


Figure 3.3.1 : Activity Diagram-(Login)

3.3.2 Activity Diagram (Login for Admin)

In this activity diagram we show that the admin login procedure. For admin login username and password. If enter valid email & password, then the system shows login successful and view admin Dashboard. Otherwise you will go to login option again.

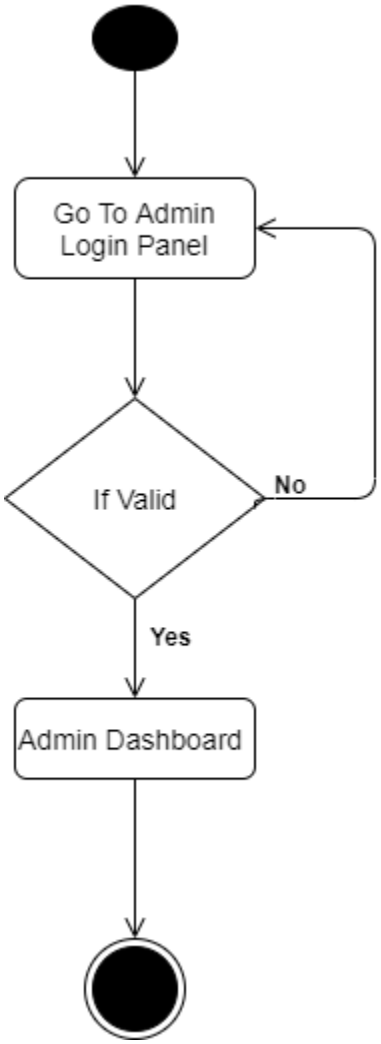


Figure 3.3.2 : Activity Diagram-(Admin)

3.3.2 Activity Diagram (Check Event)

In this Activity Diagram we show if user can login successfully then he/she can search an event/hall.

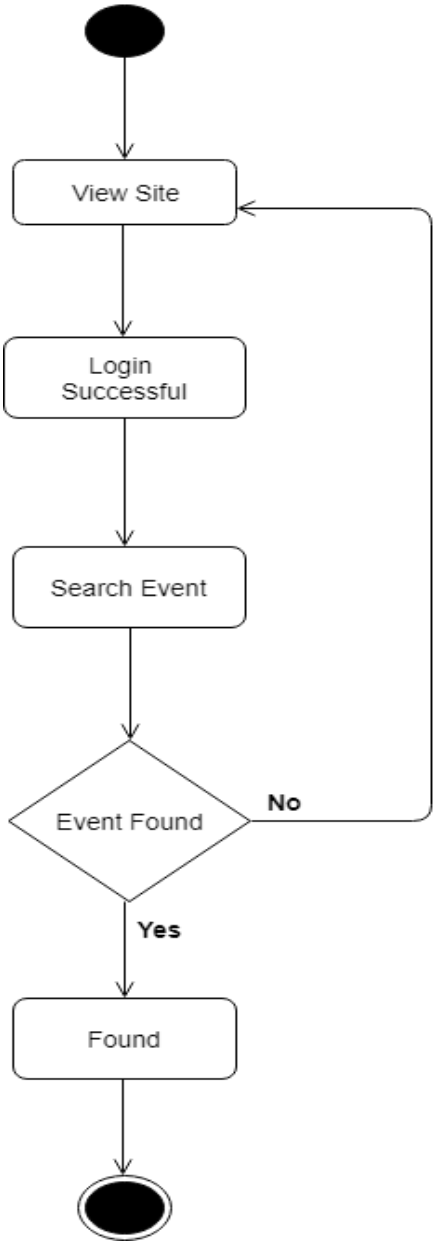


Figure 3.3.3: Activity Diagram-(Check Event)

3.3.3 Activity Diagram (Request for booking)

In this activity diagram we show after choosing an event/hall a User How to request for booking an event. For this he/she need to in my mind Booking Dates, Booking, Customers, & Available Event/Hall Time.

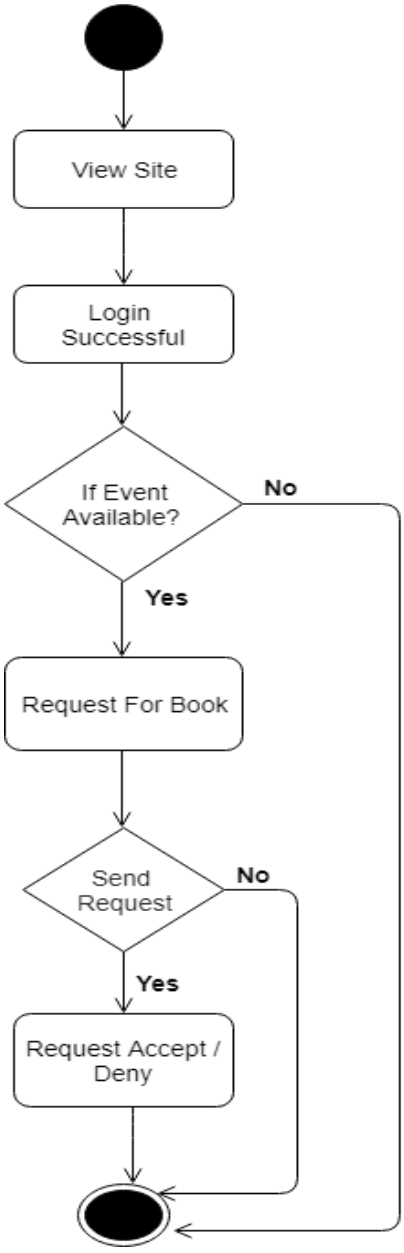


Figure 3.3.4: Activity Diagram-(Request for booking)

3.3.4 Activity Diagram (Request accept & Confirmation)

In this activity diagram we show After sending Booking request how to get confirm/rejected notification depend on availability. If the event/hall are available of that time Admin send to user an email for payment. If he/she pay for this event, he/she get confirmation email.

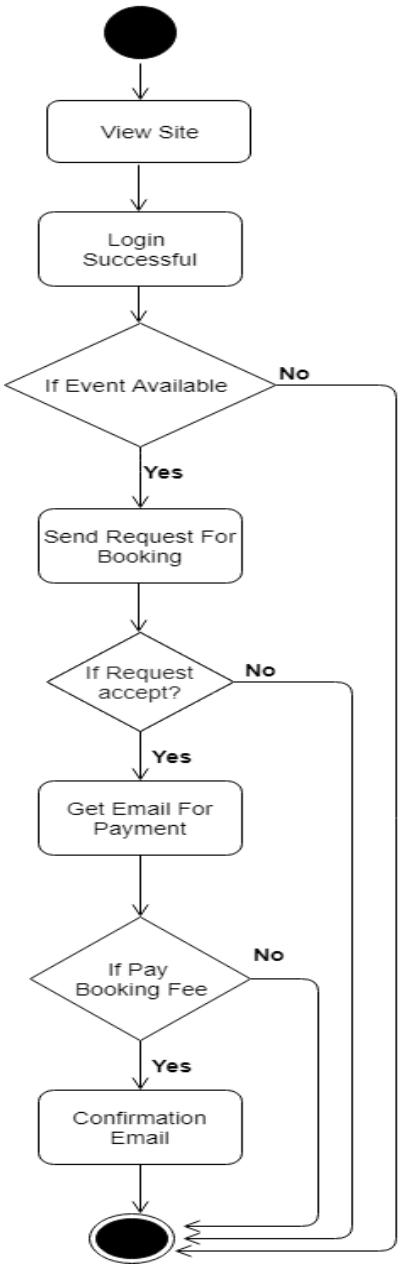


Figure 3.3.5: Activity Diagram-(Request accept & Confirmation)

3.4.1 Sequence Diagram (Check Event)

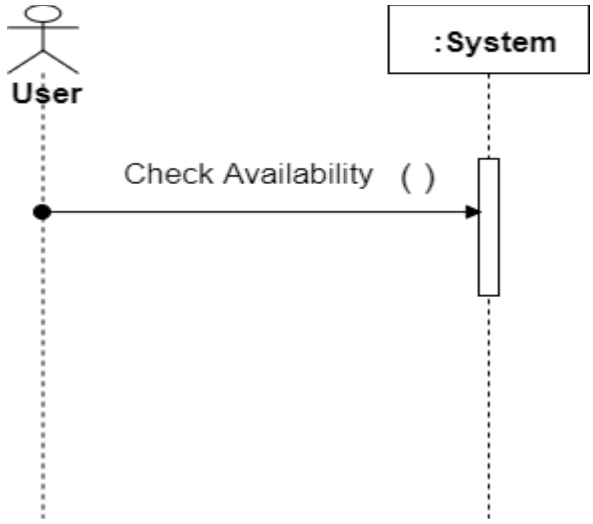


Figure 3.4.1: Sequence Diagram-(Check Event)

3.4.2 Sequence Diagram (Request for Booking)

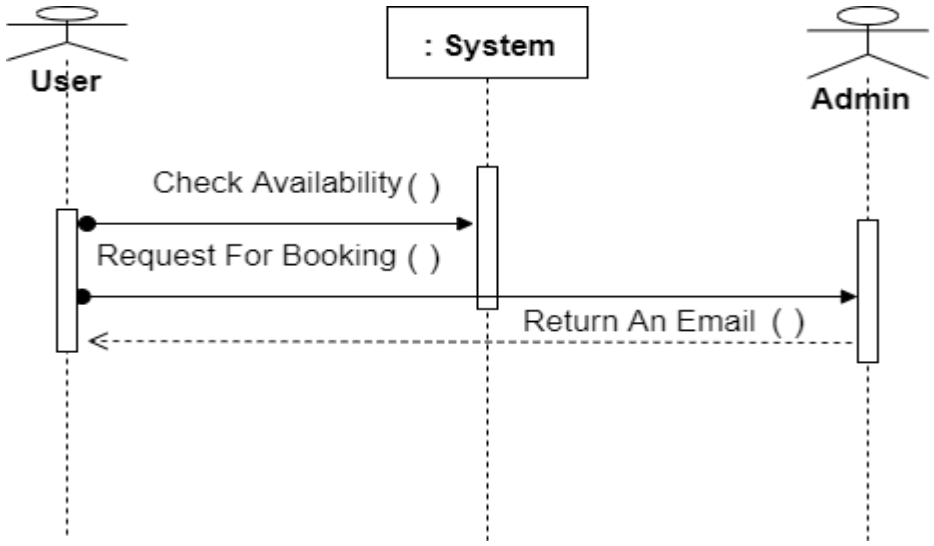


Figure 3.4.2: Sequence Diagram-(Request for booking)

3.4.3 Sequence Diagram (Approve/Disapprove Request)

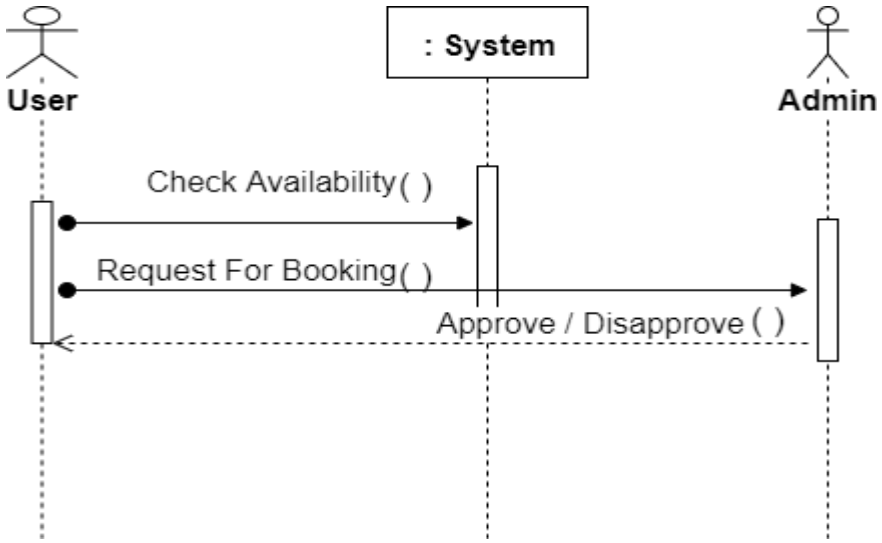


Figure 3.4.3: Sequence Diagram-(Approve/Disapprove)

3.4.4 Sequence Diagram (Get Email for Payment)

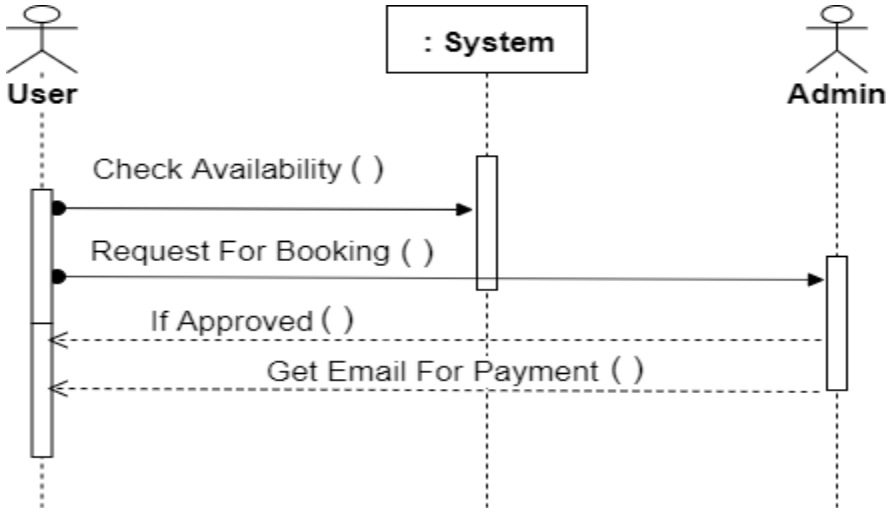


Figure 3.4.4: Sequence Diagram-(Get mail for payment)

3.4.5 Sequence Diagram (Payment Confirmation)

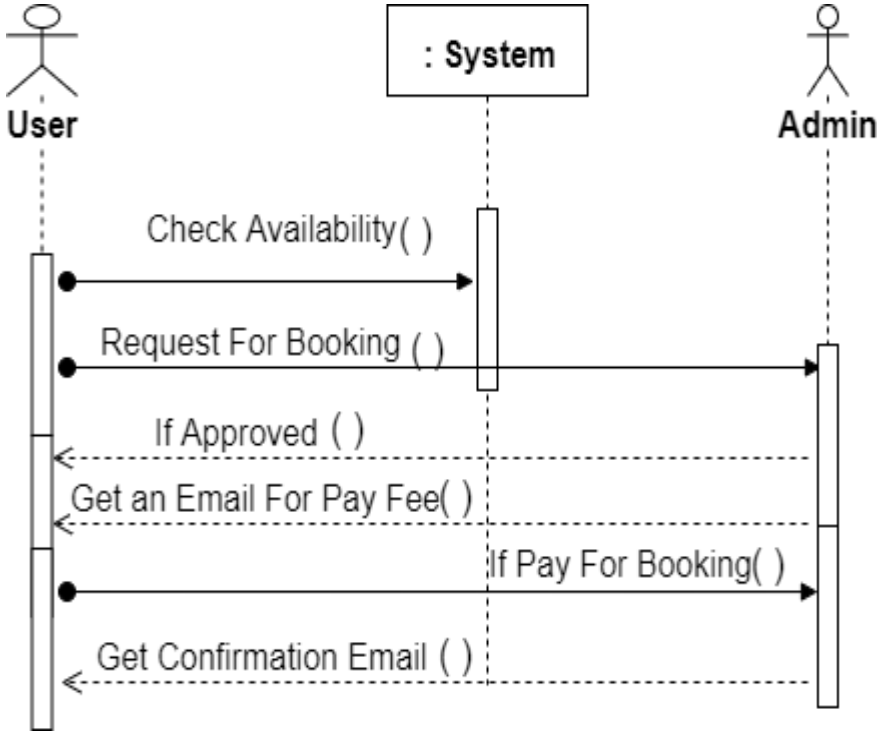


Figure 3.4.5: Sequence Diagram-(Payment Confirmation)

Chapter 4

System Design & Development

4.1 Class Diagram

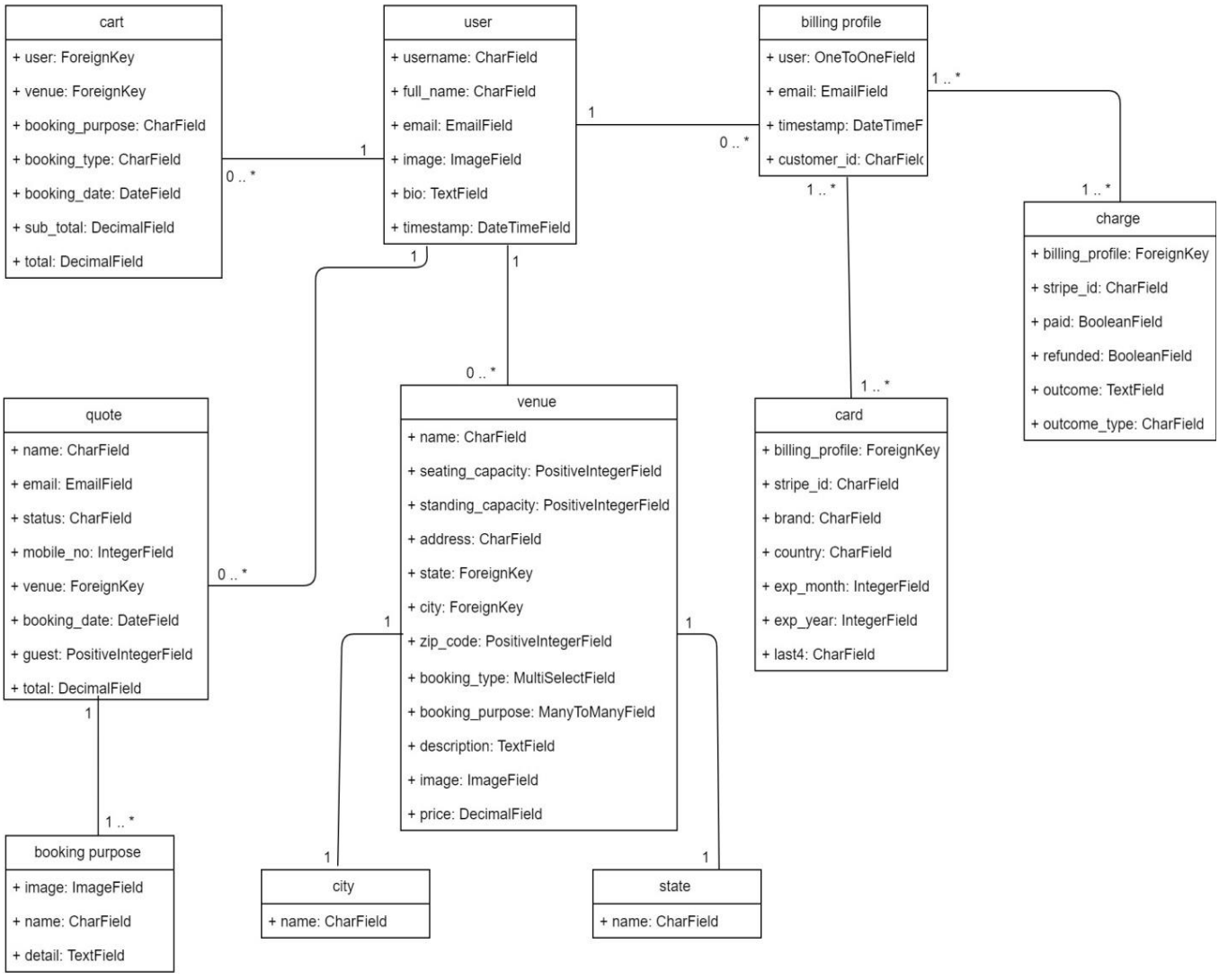


Figure 4.1: Class Diagram

4.2 ER-Diagram

An entity– relationship show depicts interrelated things of enthusiasm for a particular area of information. An essential ER demonstrate is made out of element types and determines.

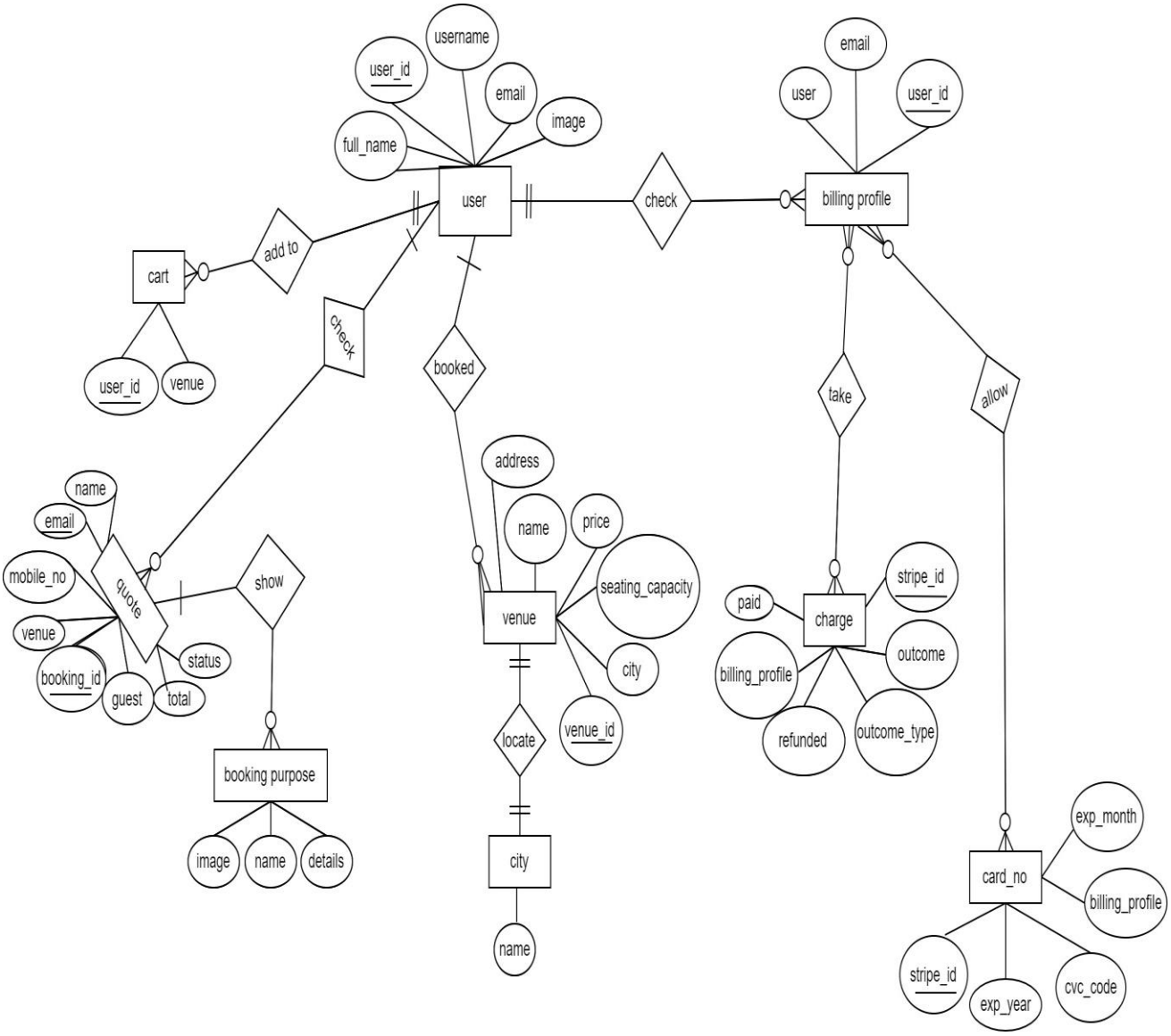


Figure 4.2: ER-Diagram

4.3 Data Flow Diagram

4.3.1 DFD(Level-0)

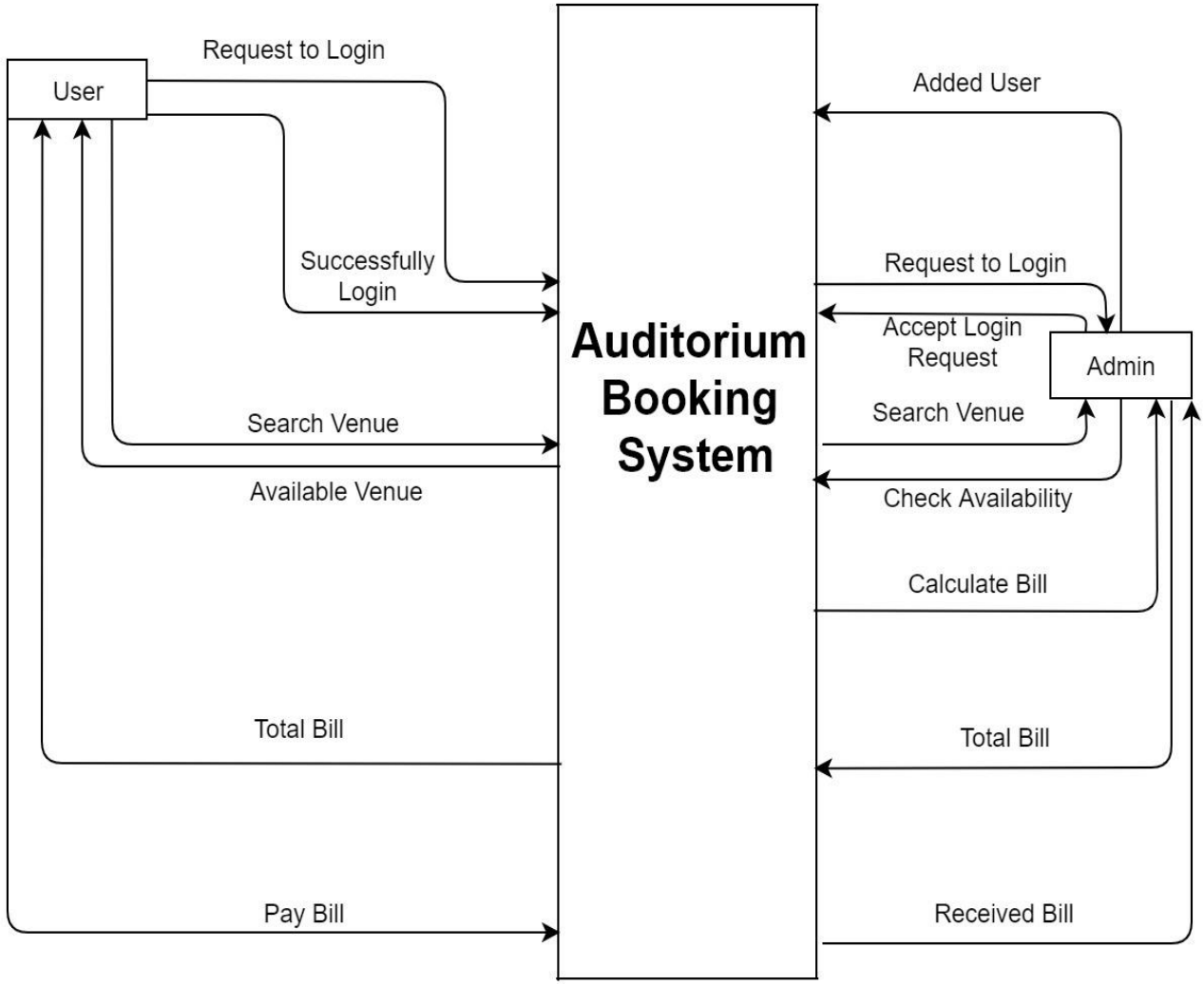


Figure 4.3: DFD-(Level 0)

4.3.2 DFD (Level-1)

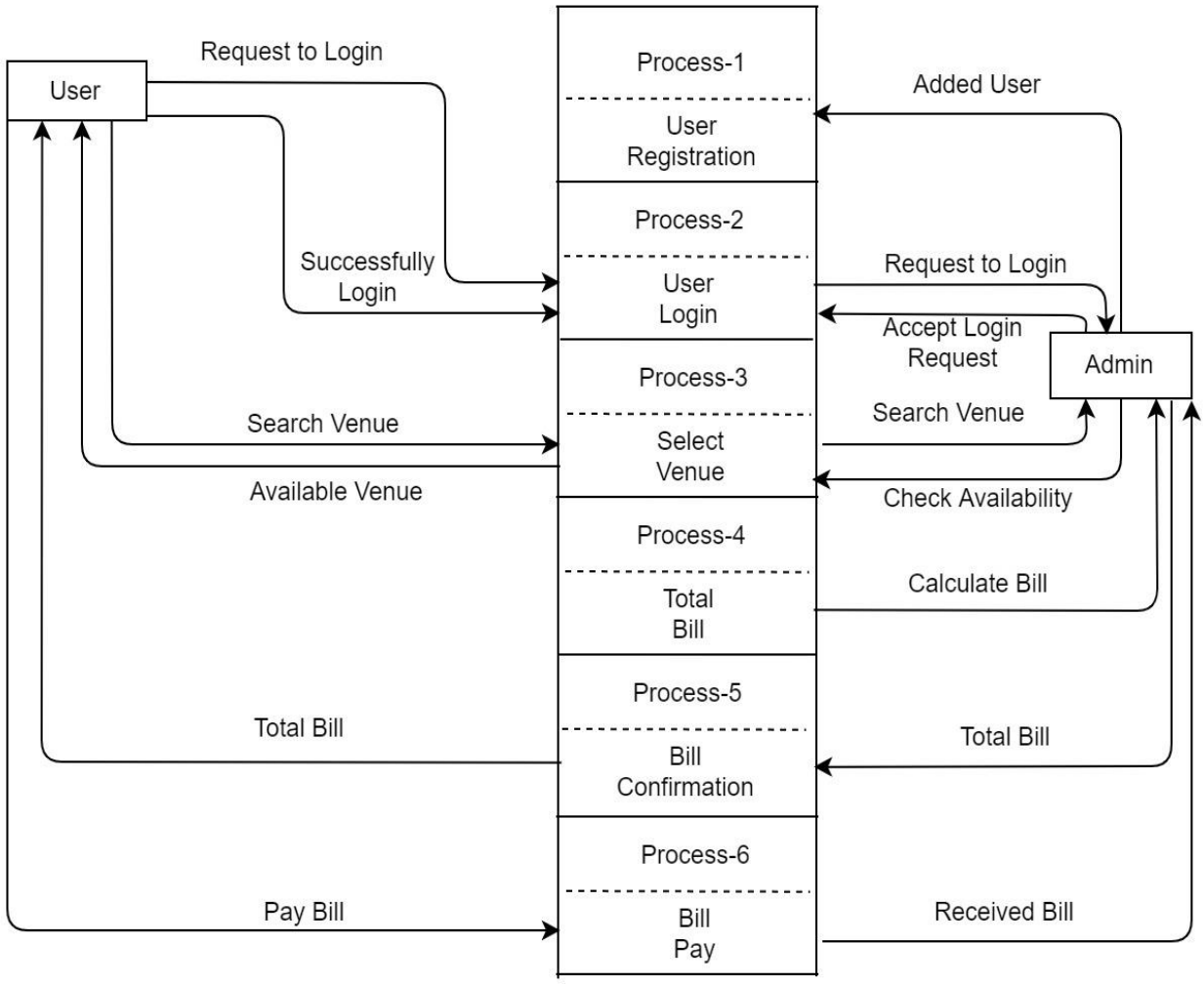


Figure 4.3.2: DFD-(Level 1)

4.4 SQLite Database

SQLite Database Server has been used to store data. Relationships are represented by diamond-shaped box. Name of the relationship is written inside the diamond-box. Every one of the substances taking part in a relationship, are associated with it by a line.

4.5 Development Tools & Technology

Mainly we used Python Editors to develop Auditorium Booking System Web Application. It is a virtual environment is a tool that helps to keep dependencies required by different projects separate by creating isolated python virtual environments for them. This is one of the most important tools that most of the Python development.

Development Tools:

- Development IDE: Pycharm
- Database: SQLite3

Development Technology:

- Programming language: python
- Pattern: MVT
- Framework: Django 2.2

User Interface Technology

- HTML
- CSS
- Bootstrap
- JavaScript
- JQuery

4.6 User Interface Technology

Python offers multiple options for developing GUI (Graphical User Interface). Out of all the GUI methods, tkinter is most commonly used method. It is a standard Python interface to the Tk GUI toolkit shipped with Python. Python with tkinter outputs the fastest and easiest way to create the GUI applications.

Chapter 5

System Testing

5.1 Testing feature

All the feature is tested by senior tester. They test every part of this project. Especially focus on Event the schedule maintaining. Available Event are also test whether it's provide data correctly or not in High priority. Event booking & Confirmation are also tested in high priority.

5.2 Testing Strategic

Testing Strategy is very positive of Auditorium Booking System. Most of these feature are tested in this Web Application. No features have not to be left to test.

5.2.1 Test approach

Testing approach is something critical where framework is test how it functionalities work or not. It's depicting of test arranging from the earliest starting point of the task.

5.3 Testing Environment (hardware/software requirements)

Auditorium Booking System environment was remarkable among the test group. They arrange equipment and programming appropriately making test condition as required.

5.4 Test Case

Test Case is tested by tester who work in project or intuition. There are few test case in this system like Take Test and Show Result. This test case will show how system need to take test and after submitting Show result.

5.4.1 Integration Testing Case Module Check Events

Test Case ID. 01	Module Name: Check Event
Module: User Take Test Module	Test Designed: Md. Solaiman
Test Priority: (Low/Medium/High): High	Date: 10.11.19 High
Test Title: Verify How much events are available or not? Admin check available event's really available or booked?	Test Executed By: Md. Solaiman
Description: Check Event	Test Executed Date: 20.11.19

Test Case 1	Test Activity
Test steps:	1. Get a set of Events 2. Check Event's Availability.
Test Data:	Select event's really available or booked?
Expected Result:	User can select an available event.
Actual Result:	User can successfully select an available event.
Status(Pass/fail)	Pass

5.4.2 Integration Testing Case Module Approve / Disapprove

Test Case ID. 02	Module Name: Request Approve/Disapprove
Module: User Got Approval.	Test Designed: Md. Solaiman
Test Priority: (Low/Medium/High): High	Date: 10.11.19 High
Test Title: Admin Verify Booking Request Event are available or not. If available he Confirm over Email.	Test Executed By: Md. Solaiman
Description: Request Approve/Disapprove.	Test Executed Date: 20.11.19

Test Case 2	Result Activity
Test steps:	1. User Sent an Even Booking request. 2. Admin got the request & Request Approve/Disapprove.
Test Data:	Admin got an Event Booking request from User.
Expected Result:	Admin check availability and Approve/ Disapprove request.
Actual Result:	User can successfully Approve/Disapprove.
Status(Pass/fail)	Pass

5.4.3 Integration Testing Case Module Email Notification

Test Case ID. 03	Module Name: Email Notification
Module: User Got Email Notification for Approve/Disapprove.	Test Designed: Md. Solaiman
Test Priority: (Low/Medium/High): High	Date: 10.11.19 High
Test Title: Admin Approve/Disapprove request and send an Email Notification.	Test Executed By: Md. Solaiman
Description: Email Notification.	Test Executed Date: 20.11.19

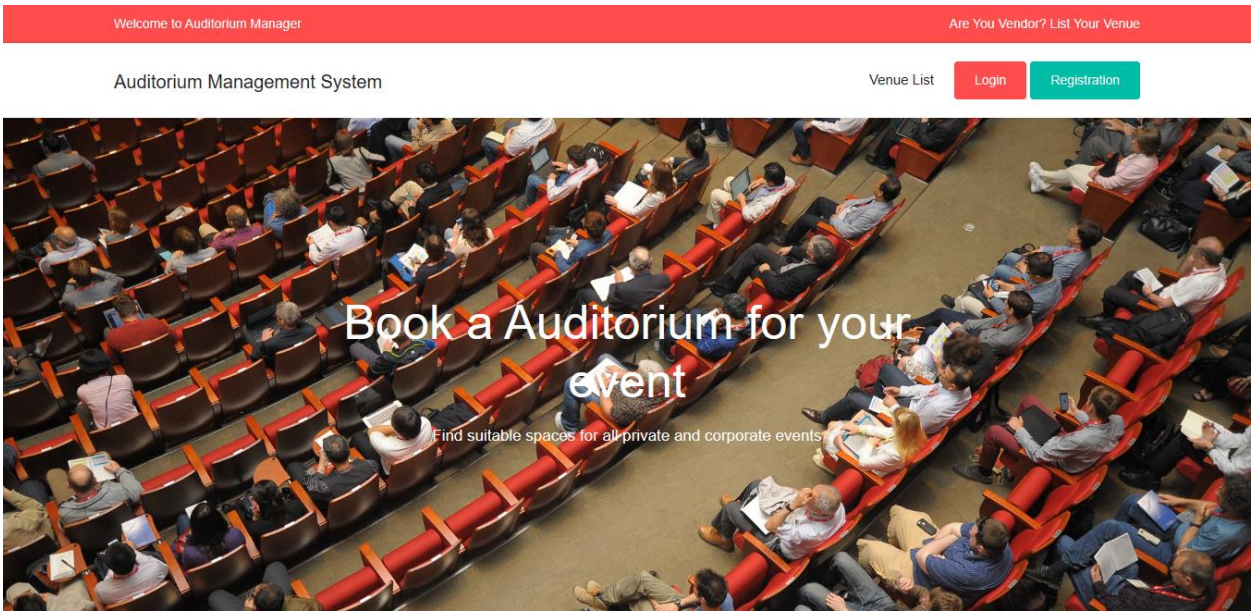
Test Case 3	Result Activity
Test steps:	1. User Sent an Even Booking request. 2. Admin Approve/Disapprove request and send an Email Notification.
Test Data:	User got an Approve/Disapprove request Notification
Expected Result:	User got an Approve/Disapprove request Notification Over Email.
Actual Result:	User can Successfully Approve/Disapprove Request Notification.
Status(Pass/fail)	Pass

Chapter 6

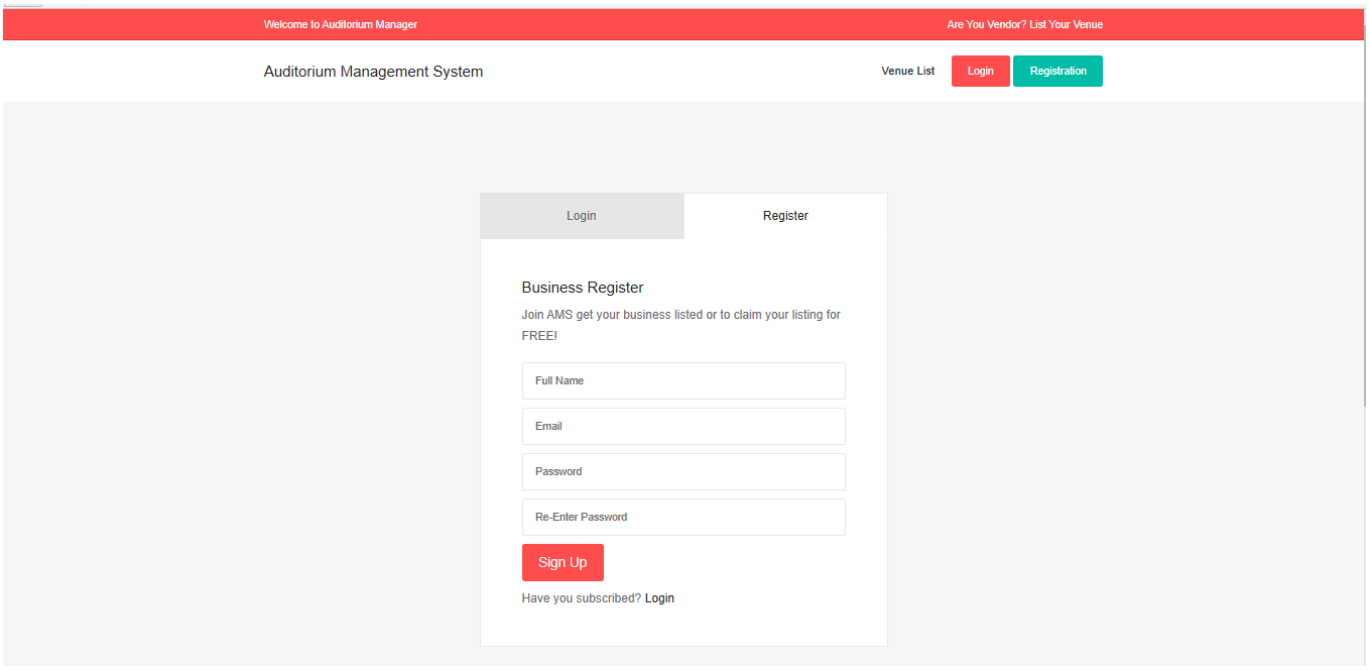
User Manual

A user guide or user's guide, likewise by and large known as a manual, is a specialized correspondence archive wanted to offer guide to individuals utilizing a particular framework.

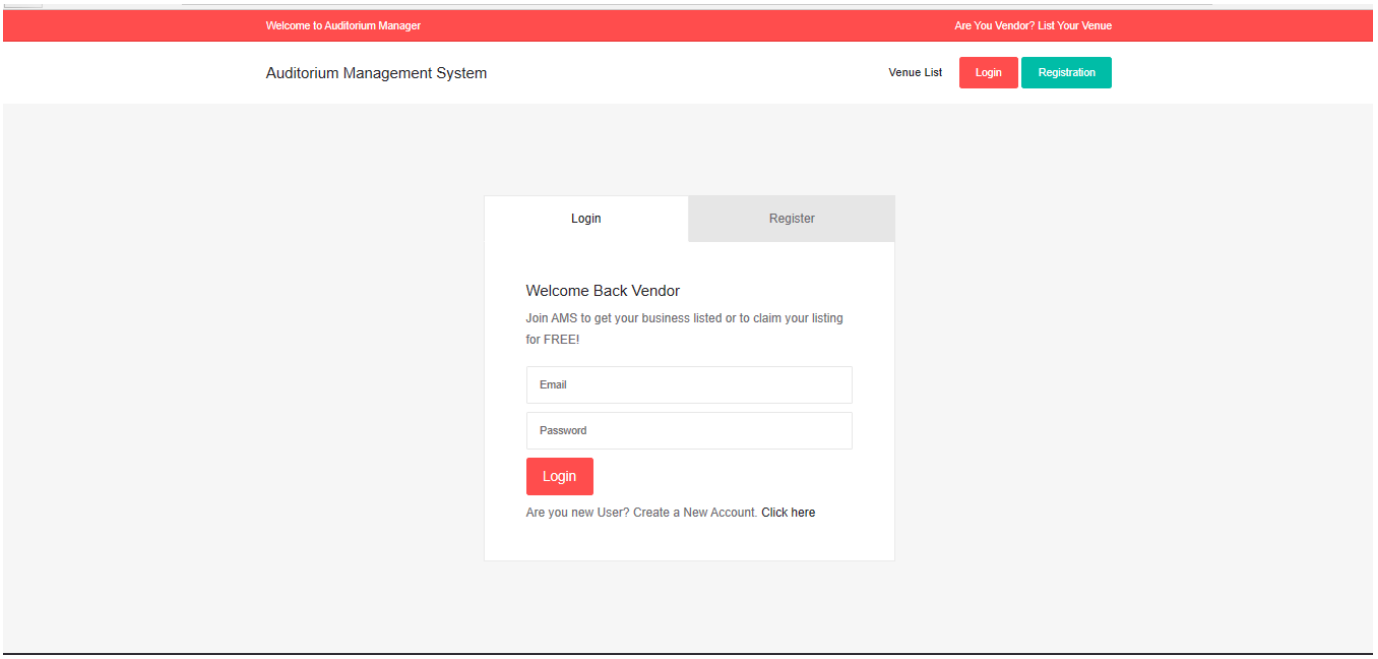
6.1 Home Page



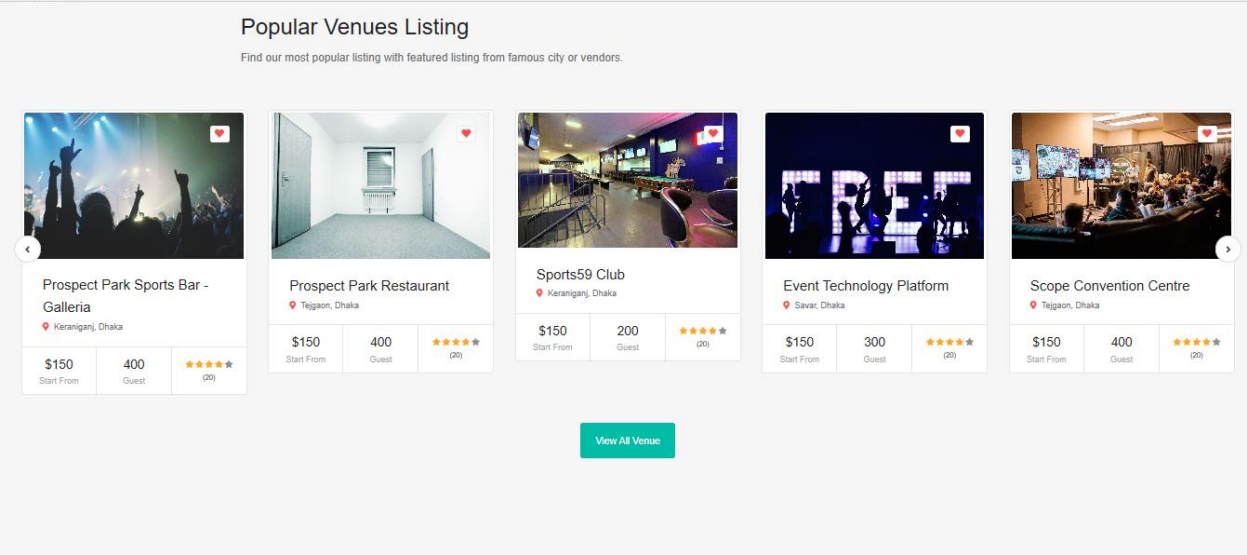
6.2 User Registration



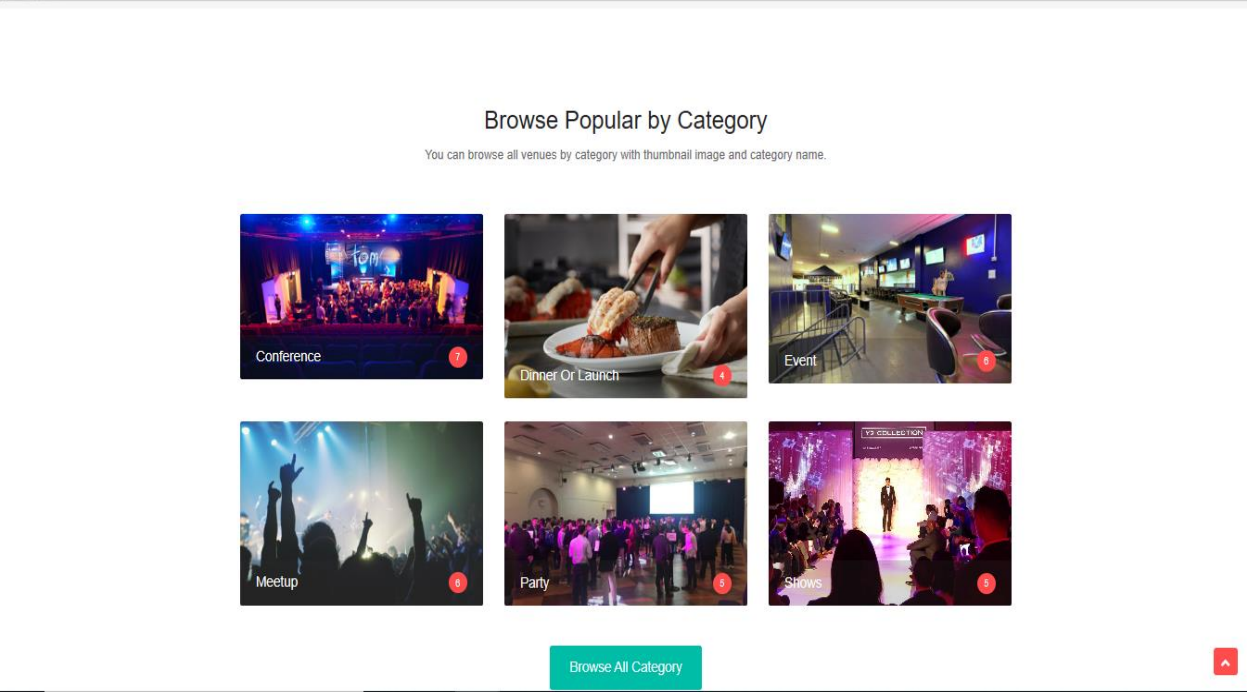
6.3 User Login



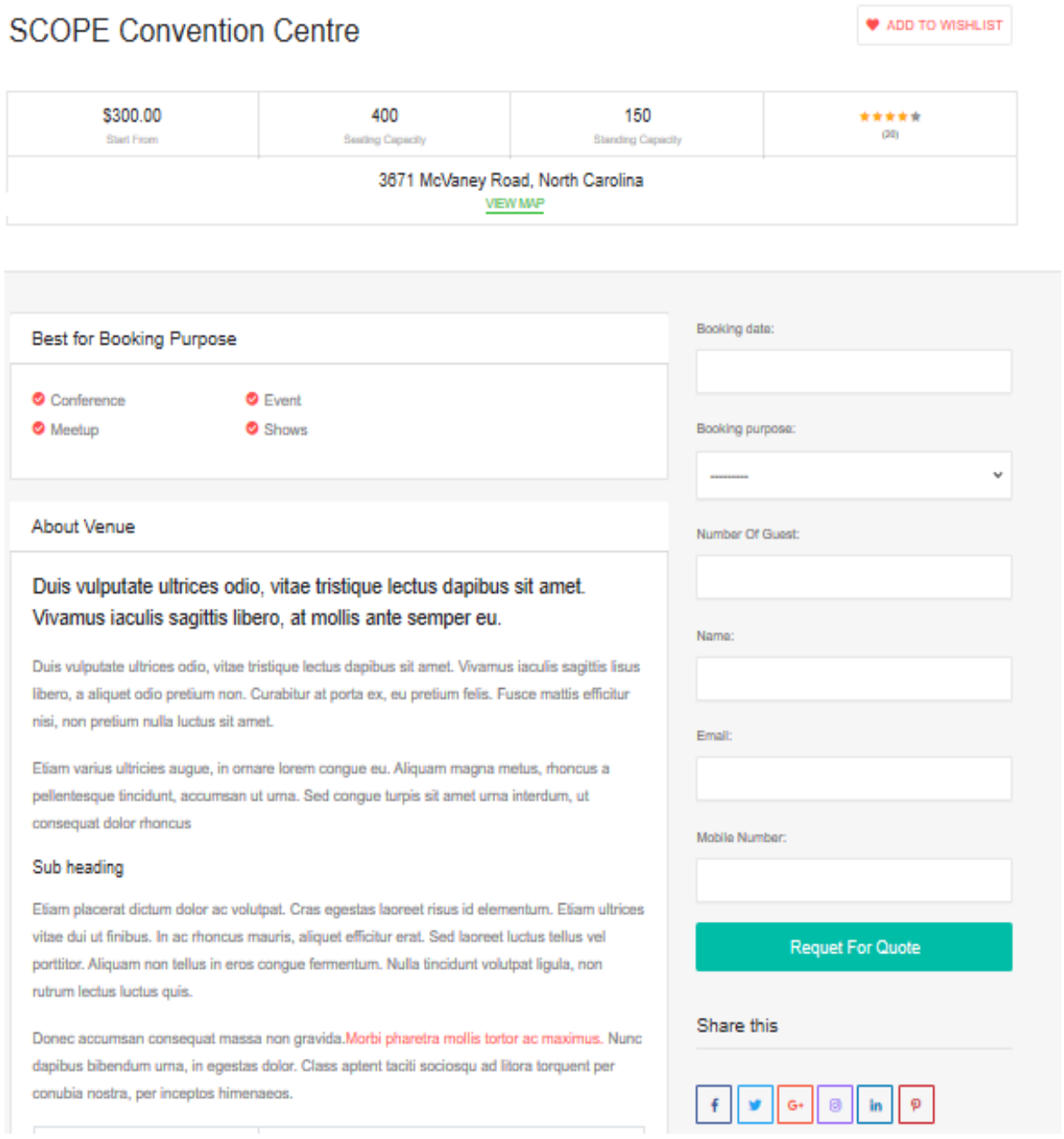
6.4 Popular Venues Listing



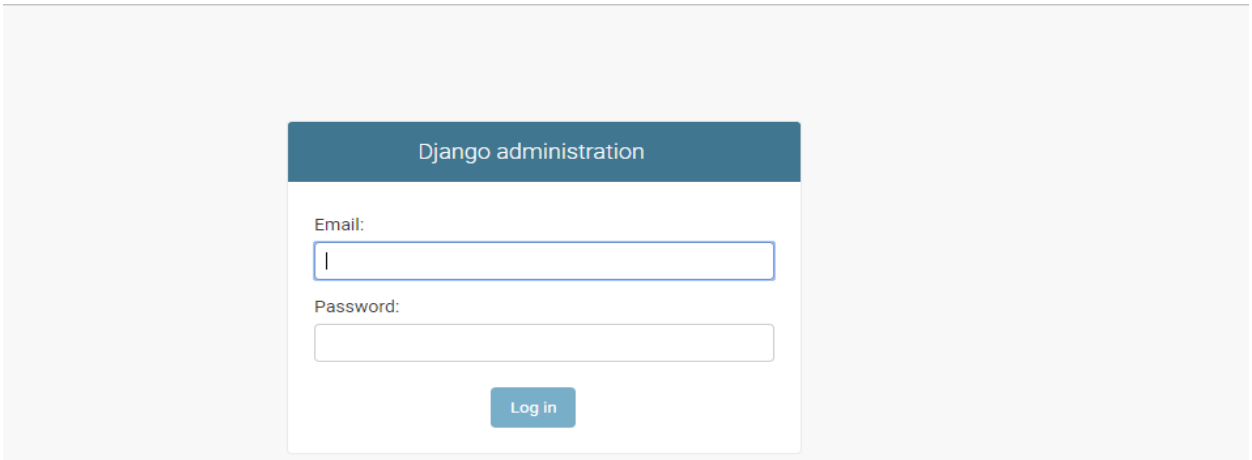
6.5 Popular Browsing Category



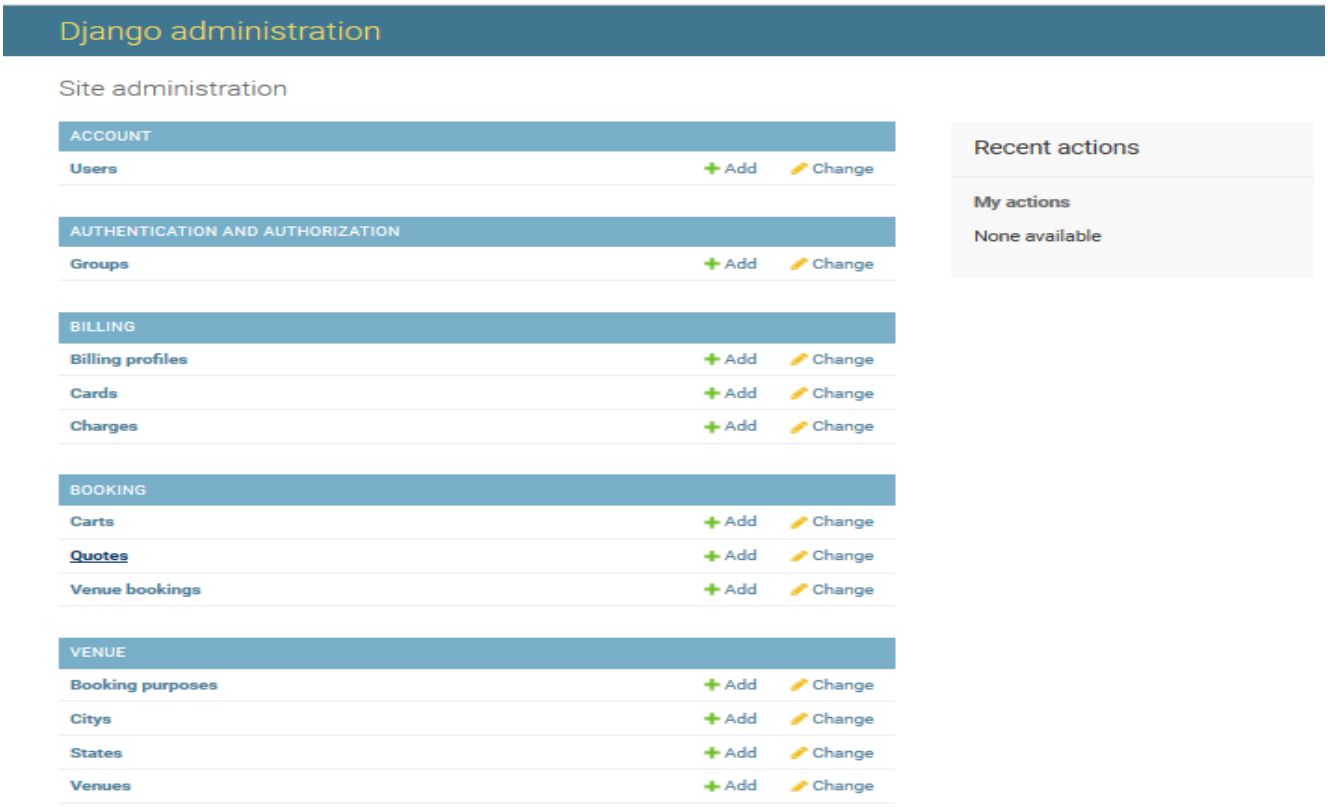
6.6 Event Booking



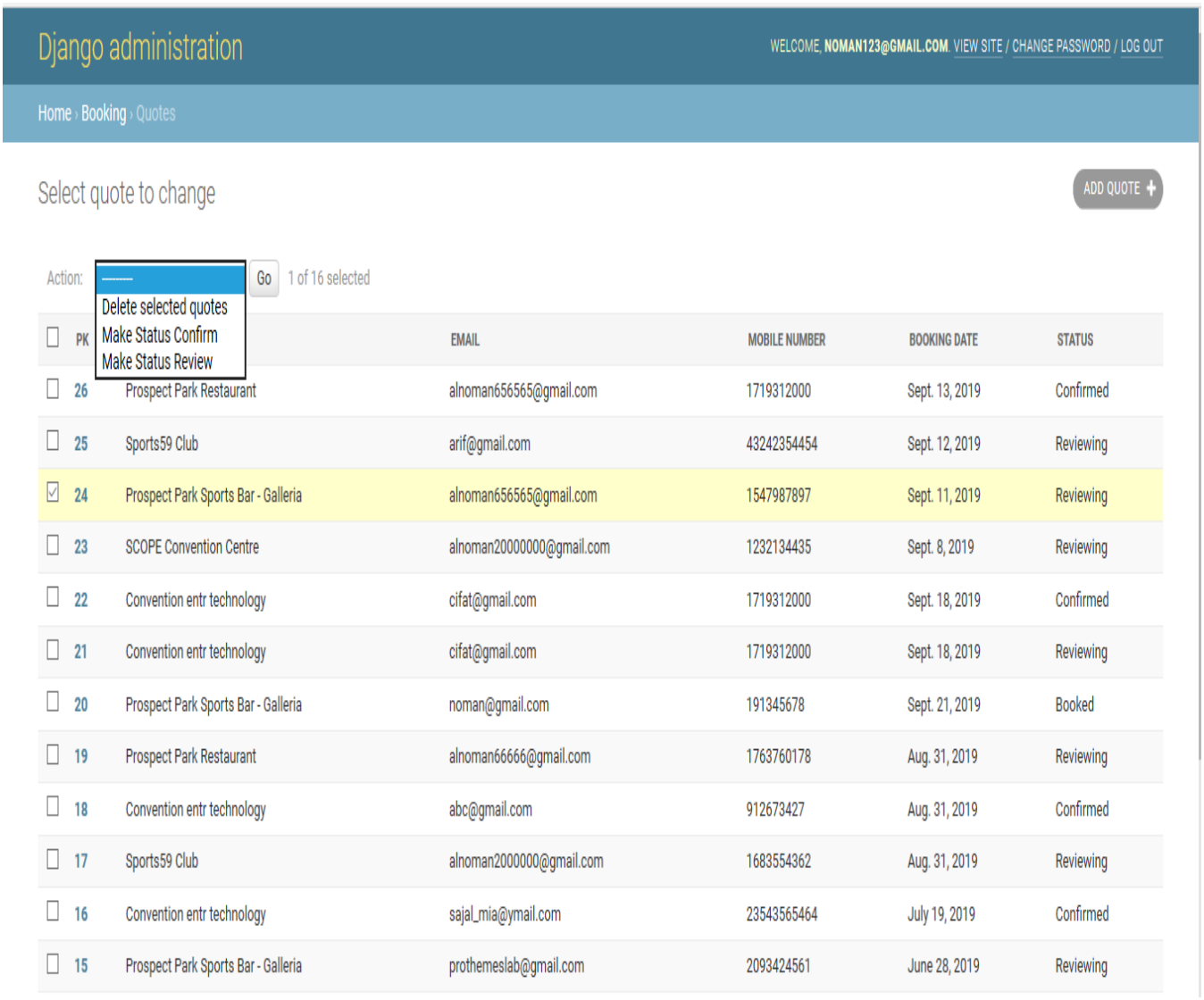
6.7 Admin Login



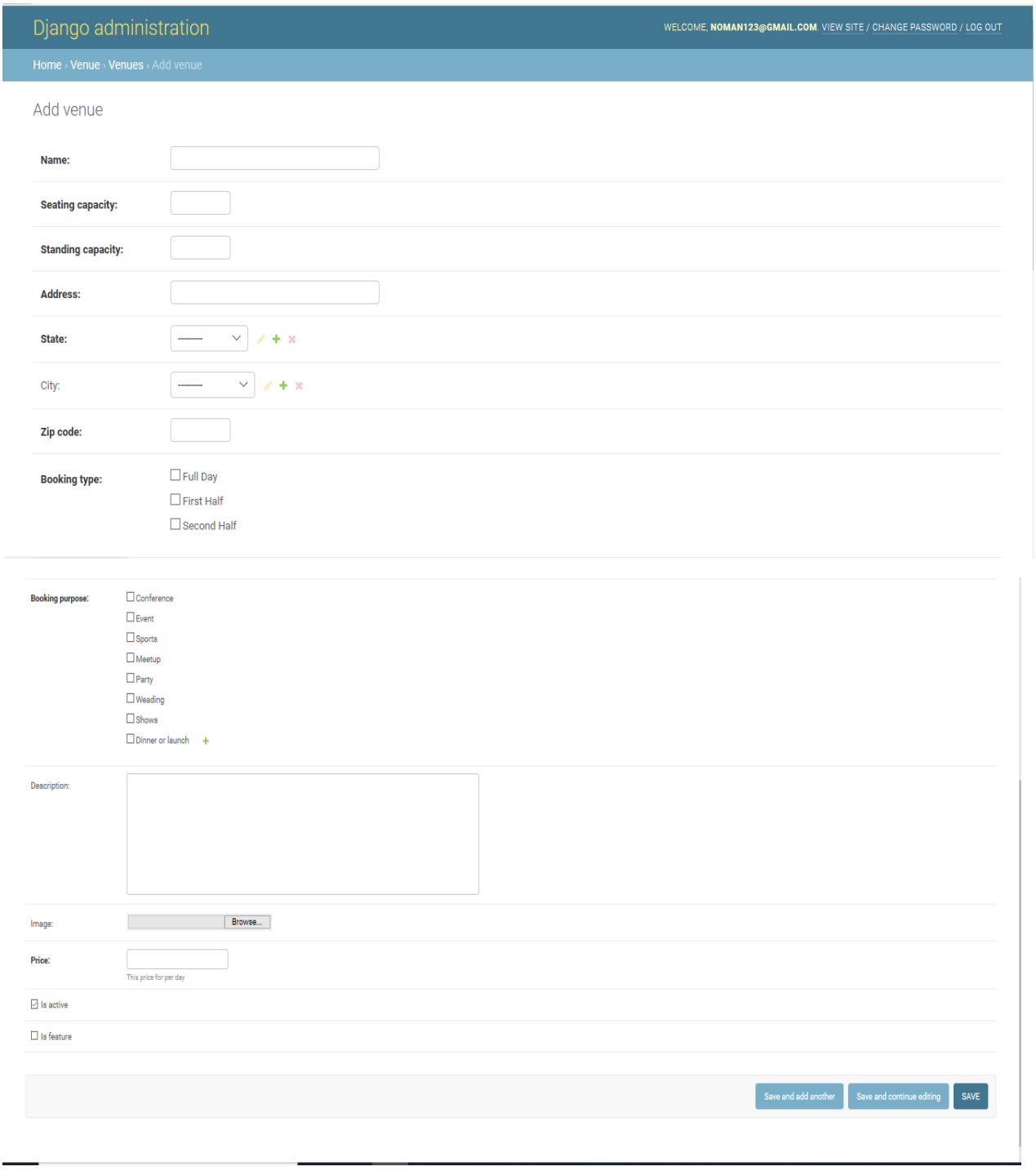
6.9 Administration Panel



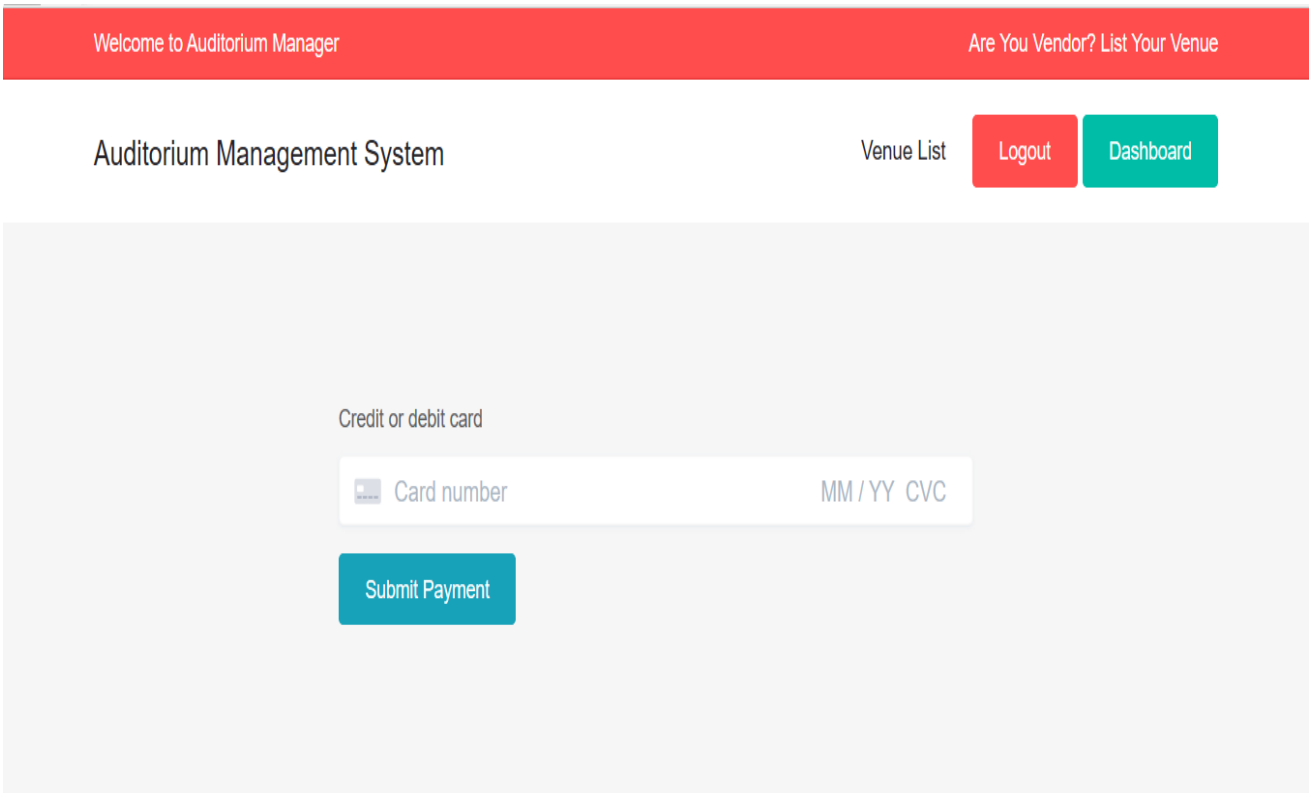
6.10Approve/Disapprove Request

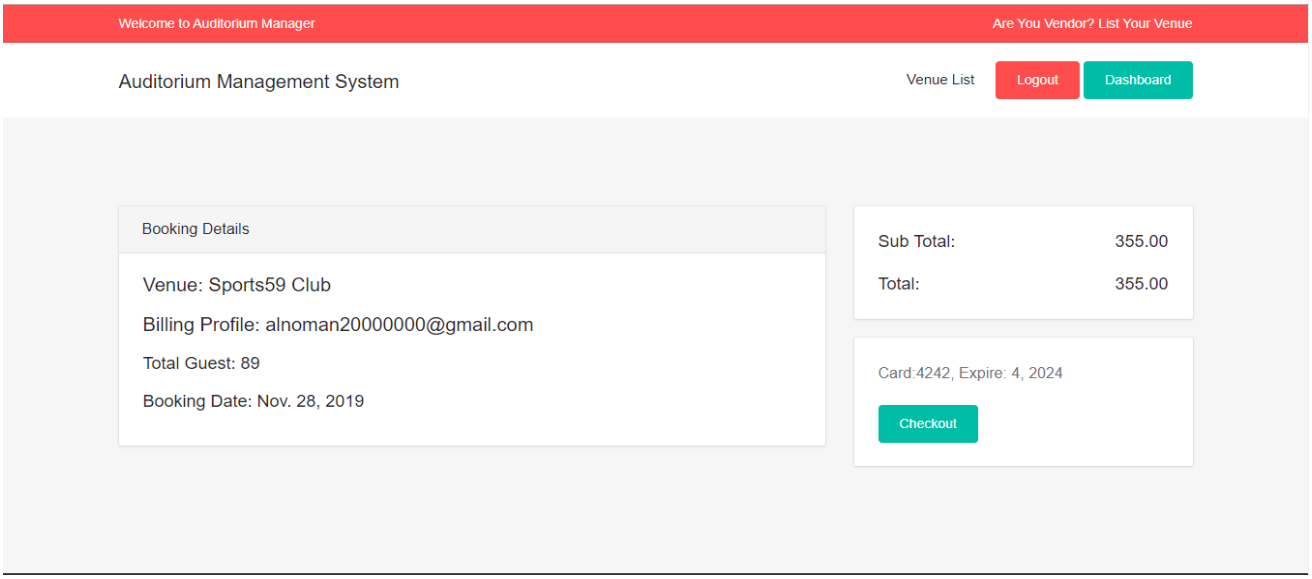


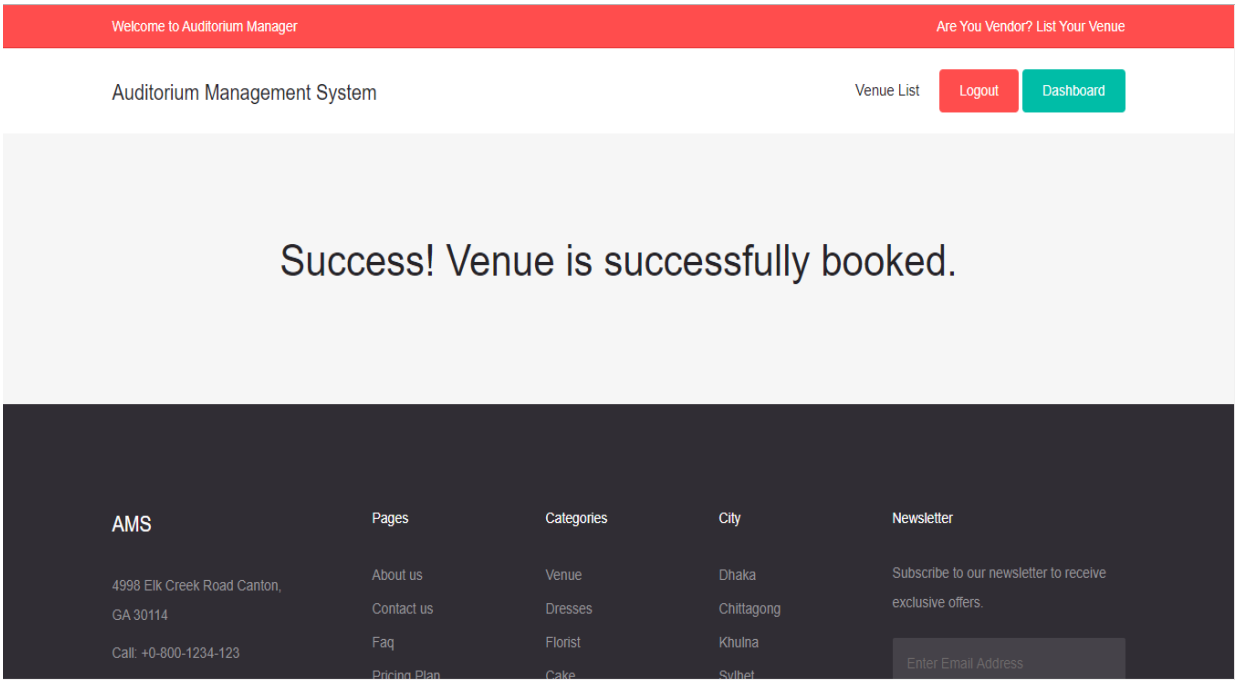
6.11 Add New Venue



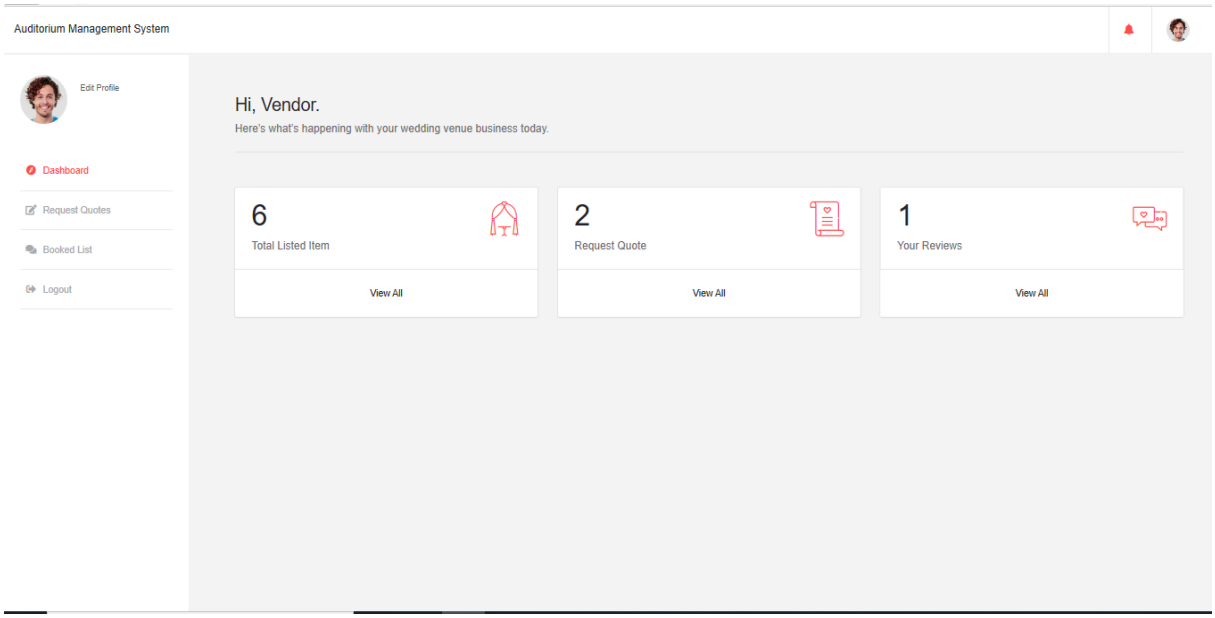
6.12 Payment System

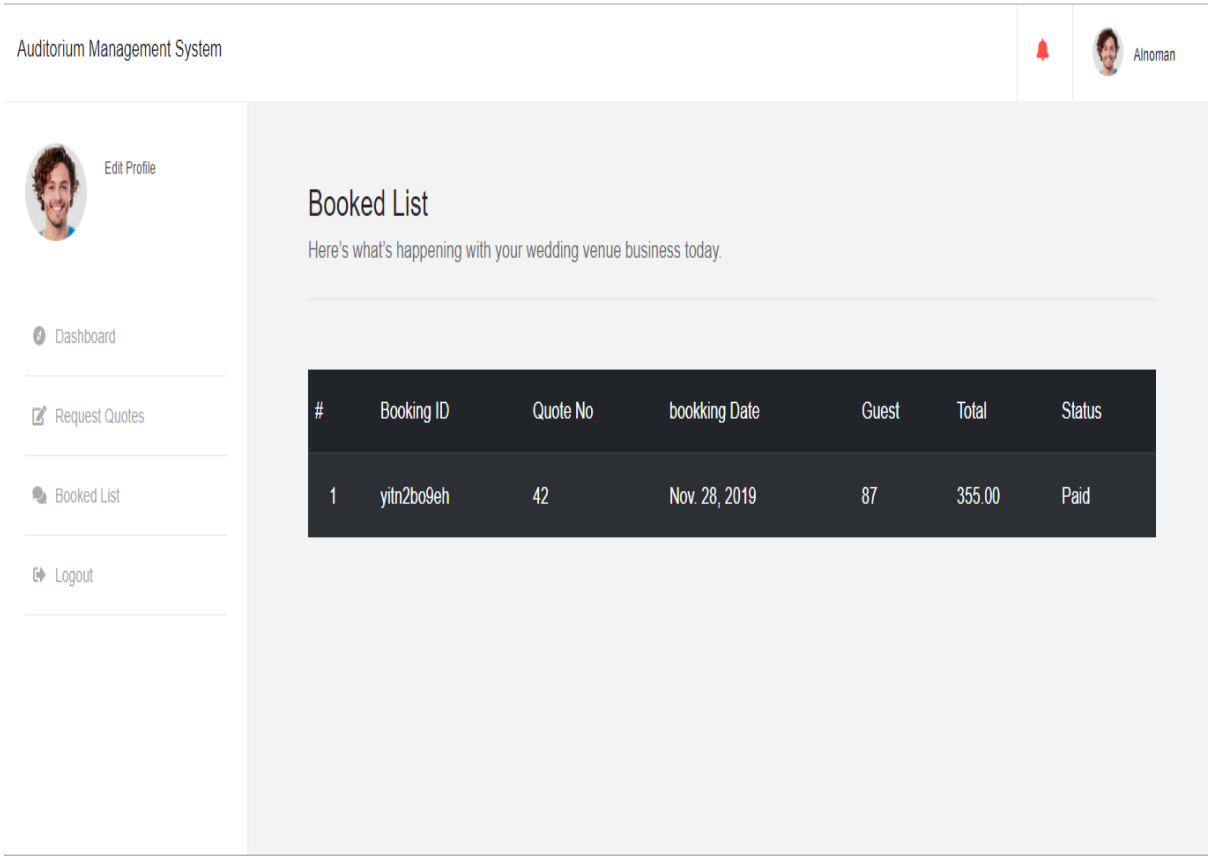



Welcome to Auditorium Manager
Are You Vendor? List Your Venue
Auditorium Management System
Venue List
Logout
Dashboard
Booking Details
Venue: Sports59 Club
Billing Profile: alnoman20000000@gmail.com
Total Guest: 89
Booking Date: Nov. 28, 2019
Sub Total: 355.00
Total: 355.00
Card:4242, Expire: 4, 2024
Checkout


Welcome to Auditorium Manager
Are You Vendor? List Your Venue
Auditorium Management System
Venue List
Logout
Dashboard
Success! Venue is successfully booked.
AMS
4998 Elk Creek Road Canton, GA 30114
Call: +0-800-1234-123
Pages
About us
Contact us
Faq
Pricing Plan
Categories
Venue
Dresses
Florist
Cake
City
Dhaka
Chittagong
Khulna
Sylhet
Newsletter
Subscribe to our newsletter to receive exclusive offers.
Enter Email Address

6.13 User Dashboard





Chapter 7

Project Summary

7.1 GitHub Link

https://github.com/AbdullahAlNoman1/Aditorium-Booking

7.2 Critical Evolution

Framework has some basic advancement that our designer faces amid improvement. Our engineer defeat all around effectively.

7.3 Limitations

There are few limitation in this project like Financial Backup. If I got proper Financial Backup and guideline I can run this project in market.

7.4 Obstacles & Achievements

When I start to develop this project I faced many obstacles but I successfully achieve the goals.

7.5 Future Scope

In future we can Add all kind of mobile banking payment System.

7.6 References

- W3School, Available: https://www.w3schools.com
- https://www.javatpoint.com/python-tutorial
- https://www.tutorialspoint.com/javascript/index.htm
- https://themes.getbootstrap.com/