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Project on Website For The Office Of Industry Academia Relations SETS,IUB

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Project on Website For The Office Of Industry Academia Relations SETS,IUB

By

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Summer, 2022

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September 14, 2022

Dissertation submitted in partial fulfillment for the degree of Bachelor of Science in Computer Science

Department of Computer Science & Engineering

Independent University, Bangladesh

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Attestation

I hereby certify that I, Adiba Sintha Prome - 1720157, a student affiliated with Independent University Bangladesh, have finished the report and submitted it as a partial fulfillment of the requirement for the Degree in Computer Science and Engineering from Indcpendcnt Universitv, Bangladesh. I have been guided by my respected faculty Mr. Asif Bin Khaled the sources of information used in this project and report has been duly acknowledged in it.

Adiba Sinthia Prome — 14.09.22

Signaturc — Datc

Adiba Sinthia Prome

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Acknowledgement

First and foremost, I give praise to Almighty Allah (SWT), who provided me with this opportunity and the chance to submit my internship report on time. I would want to show my appreciation to the Faculty of Computer Science and Engineering for maintaining my internship credit in the graduate program curriculum and allowing me the chance to experience industry-oriented company and the line of work that interests me. I want to express my sincere gratitude to Asif Bin Khaled, Lecturer in the Department of Computer Science and Engineering at Independent University in Bangladesh, who served as my supervisor and inspired and guided me during the course of pursuing this internship and writing this report.

I also want to express my sincere gratitude to my technical supervisor, Dr. Omar Faruk, of the Office of Industrial Relations, Sets, for his kind encouragement, direction, constructive criticism, supervision, instructions, and advice. He also inspired me to complete my internship at the Office of Industrial Relations, Sets, successfully.

Additionally, I must point out this organization's fantastic working atmosphere and devotion to the group, both of which have given me the ability to handle a variety of situations. Last but not least, I want to express my gratitude to my parents and other family members for their unending support.

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Letter of Transmittal

Mr. Asif Bin Khaled
Lecturer
Department of Computer Science and Engineering
School of Engineering and Computer Science
Independent University, Bangladesh

Subject: **Submission of Internship Report.**

Dear Sir,
I hereby submit my internship report, which is part of the curriculum of the bachelor's program in computer science and engineering. It is a great achievement to work under your active supervision. This report is based on "Internship with Industrial Relations Office, SETS". I had the opportunity to spend three months at the Office of Industrial Relations, SETS, under the supervision of Dr. Omar Faruk, Office of Industrial Relations. This internship allowed me to gain academic and practical experience. The internship gave me the opportunity to build a network with the business community. I have tried to make this report as informative as possible based on the experiences I gained during my internship. In order to create a well-organized internship report, I have followed the guidelines and described the required fields with sufficient details. However, I sincerely believe that this report will serve the purpose of my internship program. I would be very grateful if you would accept this report and give your valuable opinion. I would be very happy if you find this report useful and informative by offering an obvious perspective on the subject.

Sincerely,
Adiba Sinthia Prome
Id: 1720157
Department of Computer Science and Engineering
Independent University, Bangladesh

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Evaluation Committee

Asif

.....

Signature

Md. Asif Bin Khaled 14/09/22

Name

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Supervisor

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Signature

Md.Raihan Bin Rafique

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Name

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Internal Examiner

14.09.22

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Signature

OMAR FARUK

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Name

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External Examiner

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Signature

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Name

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Convener

Dr. Mahady Hasan
Head, Department of CSE
School of Engineering & Computer Science
Independent University, Bangladesh (IUB)

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Executive Summary

This report includes information about a website made for the SETS, IUB Office of Industrial Relations. Basically, this website was created so that people may visit it and learn more about OIR. They can keep track of future events that will be planned and sign up for them on the website, but they can also learn about past events that have already happened and acquire event information. Additionally, it is a fantastic chance for the students to stay informed about their internship experiences and a chance to earn an internship with OIR.

Keywords— OIR, Project Management

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Chapter 1

Introduction

Internships are often closely linked to the academic and career goals of each individual examinee. The purpose of the internship is to enable candidates to focus on their career interests and possibilities throughout the country. Internship Engineering Technology and Science and Independent University School offers undergraduate programs in Computer Science and Engineering as a student of CSE The program requires me to complete an internship with a reputable company where I actually work. Training in Environmental Development and Familiarity with the Industry.I worked at Office of Industrial Relations,SETS,IUB, where I have completed the construction of my internship. The experience of working in that organization I have learned and how to make it a professional way for me. In this report, I have discussed my internship period at Office of Industrial Relations,SETS,IUB, an overview of the work I have done, my experiences working for a reputed organization,what I have learned and how it has helped me to develop and grow with a professional way.

1.1 Overview of the Work

The project of creating a website was a new thing for me to start because I am doing it as an internship. Creating a website for my company was a whole new challenge for me to deal with.I had to learn from them and I had to face the strange challenge of implementing them correctly. We had to learn HTML, Tailwind CSS,Java-script, Python, Django from scratch. And we had faced arising challenges in order to implement them properly. The markup language which is HTML set the basics and the Tailwind CSS was used for the styling. As for the database, the choice was SQLite, this tool was handy and efficient. The back-end is the most important aspect of any application. So, it needs a lot of care when coding it. There are numerous frameworks available for creating a back-end that receives requests and responds appropriately.

However, utilizing Django makes things simple and easy. The writing of code was the tool to reach the outcome.In our country Bangladesh, there are lots of Industries and Universities. Basically OIR is an office where the University tries to collaborate with different companies and industries so that they can create good opportunities for the student for a better future.

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Here We have proposed a solution for this.We are creating a website where students can easily visit, get to know about OIR and look for the companies and opportunities for them according to their educational background.

1.2 Objectives

This project is completely concerned about making a website for OIR.This website is basically made for people so that they can visit the website and get knowledge about OIR. In the website they not only get to keep an eye on the upcoming events which will be arranged in the future and join the event but also can get idea about the events already took place and get event details as well. Moreover it is an great opportunity for the students to keep an update about their internship sessions as well as an opportunity of getting internship at OIR Here in the website students as well faculties and other members can get to know about OIR and its activities.

1.3 Scopes

A project's scope must be defined in order for it to be completed. while we create a new system. In the sense of new, our proposed system is not an existing one. We eagerly anticipate:

1. Create a website where people can visit and see what activities they are doing
2. Look at the reports on the programs
3. Go through events coming in future
4. Submit a form if they want to join OIR
5. Apply For Internship
6. Give a feedback

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Chapter 2

Literature Review

In other words, a literature review serves to situate the current study within the body of the relevant literature and to provide context for the reader. In such a case, the review usually precedes the methodology and results sections of the work.

2.1 Relationship with Undergraduate Studies

Knowledge and skills gained from undergraduate courses have helped in the development of "OIR Website" project. It would have been more difficult if these courses were not covered before working on this project.

A course named Data structure was about how to handle and manipulate complex arrays, objects, classes, array of objects, objects of array,nested arrays, nested objects, etc. As " OIR Website " involves many complex data structures, the skills gained from this course made handling them much easier. Object-oriented programming is based on the concept of objects. OOP can be used in manufacturing and design applications, as it allows people to reduce the effort involved. It helped to write the real time system design that are used to develop the "OIR Website".Database management systems are set up on specific data handling concepts, as the practice of administering a database evolves.This was the first course that taught me how to design and plan a project. In the database management course, I have got the basic knowledge of popular planning and strategy practices such as System development life cycle, Six Element Analysis, Rich Picture, Requirement Analysis, Entity Relationship Diagram, and Business Process Model, and many more. These techniques helped in the development planning and strategy of "OIR Website" and they helped in writing this report. I learn to design dynamic websites using Django with SQL server and with MySQL. Front-end and back-end design; database design; software management and hardware selection. Case studies of Information Systems. These techniques helped in the development planning and strategy of "OIR Website" and, they helped in writing this report also.

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2.2 Related works

Since their is no previous version of the website and it is completely new website for OIR so we needed to be careful about the details of each topics.We had to go through different sites in order to see the design and structures of those websites.Even we had created few designs on google site and sat with our coordinator as well as Dean sir in order to make a proper design for the website.We had to collect a lot of details regarding the website to put in the information in it. Normally any website related to office provides links for CV or apply job.Our website is not only for apply only.Rather students can check for internship sessions as well as can apply for internship .and here we don't only promote OIR rather also different other companies or industries who are available to collaborate with university for different purposes.So our website is a simple website but yet different from other websites

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Chapter 3

Project Management & Financing

3.1 Work Breakdown Structure

A work breakdown structure (WBS) is a hierarchical organization of the tasks required to complete a project.[4] WBS is a tool used in project management that helps break down a complex project into smaller manageable and achievable activities or processes. Electronic appointment systems have activities such as concept, design, development, maintenance, and completion. These processes are then broken down into smaller tasks and subtasks. Detailed site

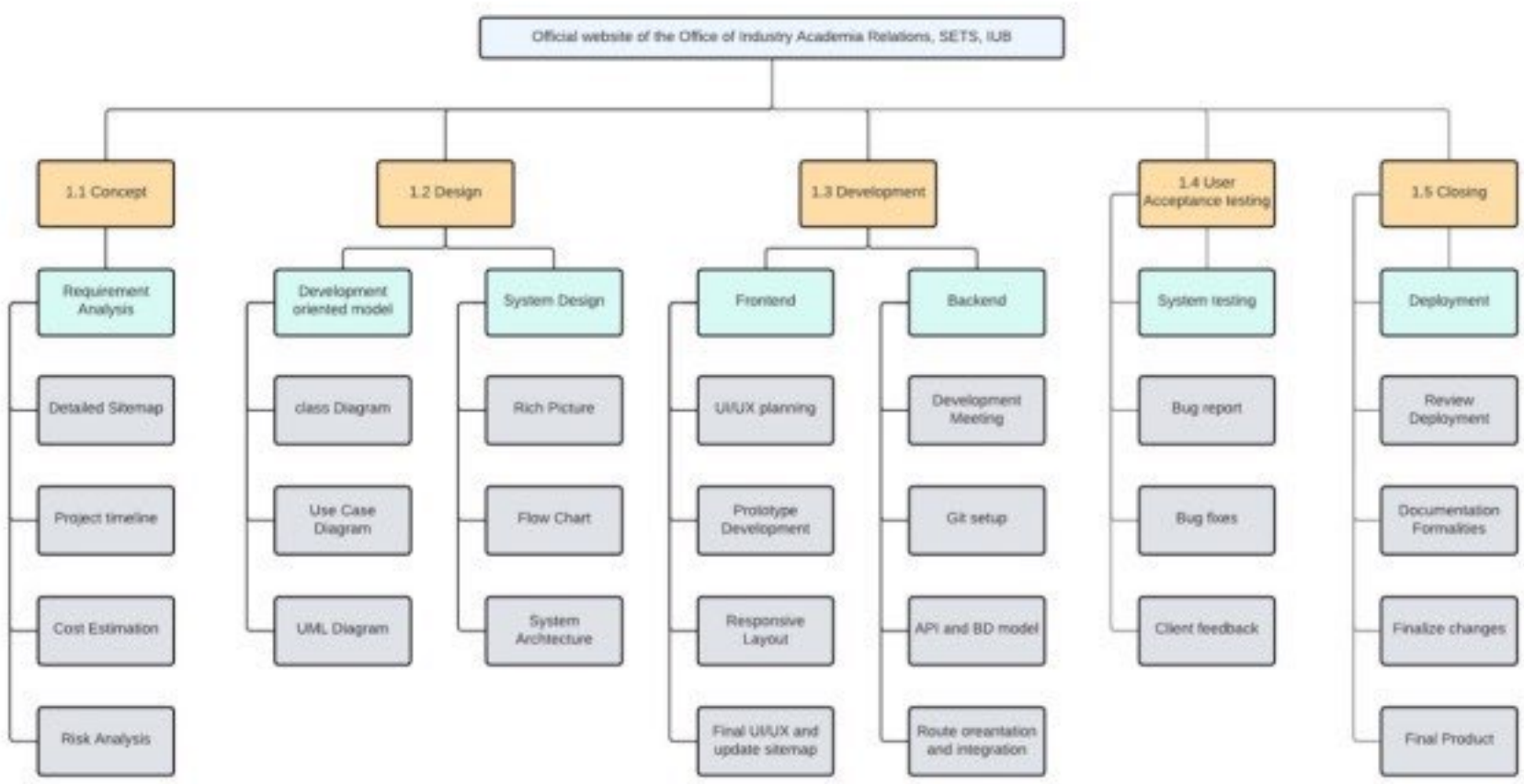


Figure 3.1: WBS of OIR website.

plan, project Schedule, risk analysis, cost estimate are the sub-tasks of requirements analysis. The design process has two sub-tasks, development-oriented model and system design. In the development-oriented model, we decompose our task into class diagrams, use case diagrams, and UML design. For system design, we have tasks like Rick Picture, Flow Chart and System Architecture. The front-end and the back-end are the two development processes of the project. User acceptance of the four system testing tasks, bug reporting, bug fixes, and customer feedback. deployment verification.

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3.2 Activity wise Time Distribution

The activity time division is widely used by project managers and professionals as a probabilistic form of the Critical Path Method (CPM). The critical path method is a technique that allows you to identify the activities required for the completion of a project. The biggest problem for the project manager and developers in designing an application correctly is time management. A critical path in project management is the longest sequence of tasks that must be completed in time to complete the entire project. Any delay in critical activities will delay the rest of the project. The critical path method plays an important role in project management. CPM calculates the longest path of scheduled activities to logical endpoints or the end of the project and the earliest and latest path that each activity can start and complete without lengthening the project. This process determines which activities are critical. Here we need 6 working days for requirement analysis, 12 days for design layout and 35 days for development, 8 days for user acceptance and testing and 9 days for deployment. A total of 70 days for the development of the official website of the Office of Industry Academia Relations SETS, IUB.

Task	Days
Requirement Analysis	6
Design layout	12
Development	35
User Acceptance Testing	8
Deployment	9
Total	70

Figure 3.2: Activity wise Time Distribution

In this chart above Activity percentage wise time distribution are shown.

1. **Requirement Analysis:** Requirements gathering is a crucial task before starting a project. If requirements are not captured and analyzed properly, it can lead to project failure. The same for our project. We devoted 9

2. **Design Layout:** The need for good design layout is essential. The primary user of will

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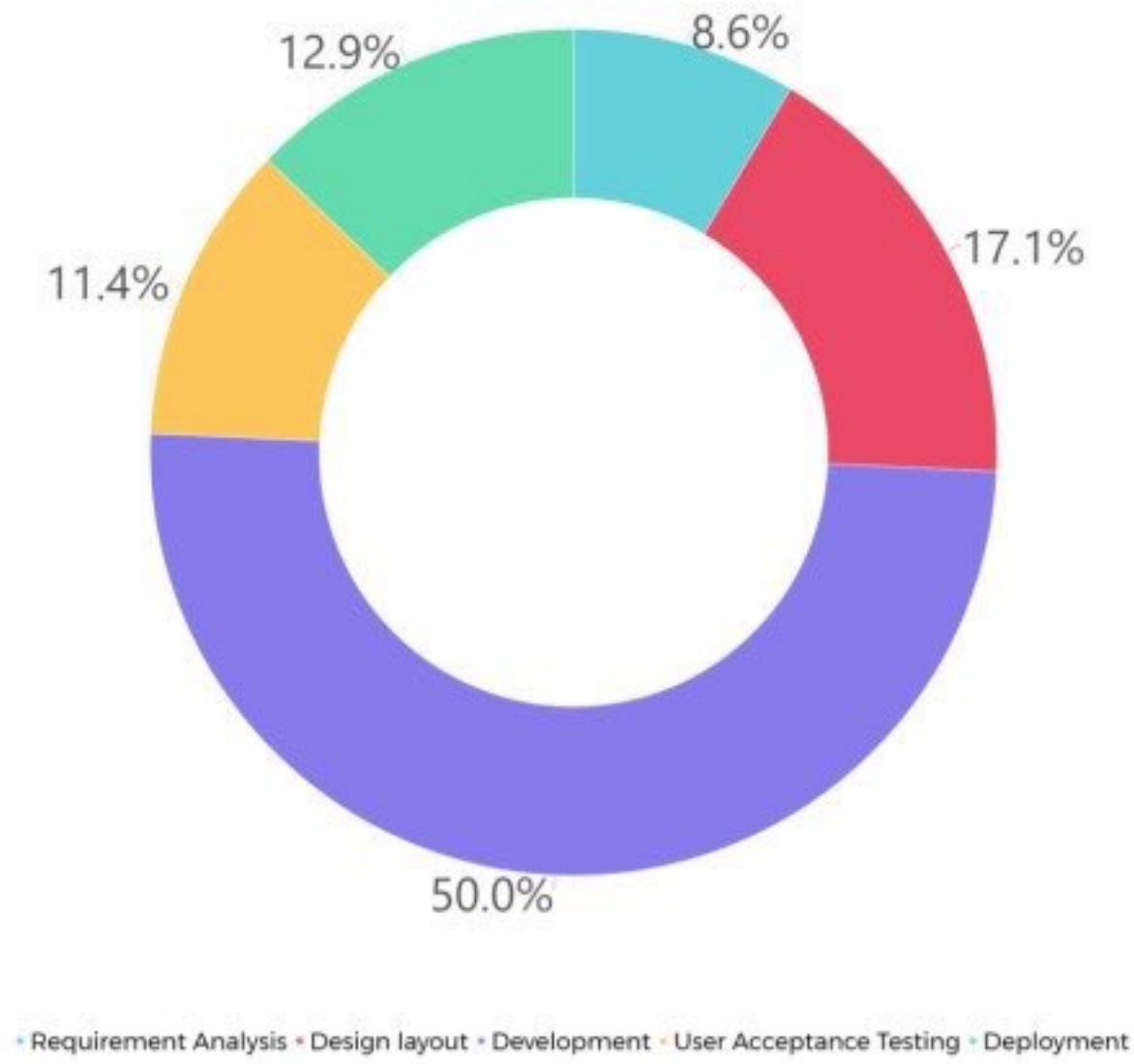


Figure 3.3: Activity wise Time Distribution Chart

be all types of users. Therefore, the design of this system should be intuitive so that the user can easily understand what each part of the system does. For this we have allocated 17

3. **Distribution:** In the end we have distribution. After checking everything, the system is hosted on the customer's domain and delivered to the customer. 13

4. **User Acceptance Testing:** Once everything is developed, certain revisions should be made to the system to check for underlying defects before handing it over to the customer. Some documents also had to be created. About 11

5. **Development:** The most important part of any system is development. If not developed properly, it will be poorly received by its users. From the design of a good and responsive system to making it fast, reliable and bugs fixed is very important. For this phase, we allocated 50

3.3 Gantt Chart

A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by

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a bar; the position and length of the bar reflects the start date, duration, and end date of the activity. With the help of Gantt Chart, we can keep track of the progress of the project.

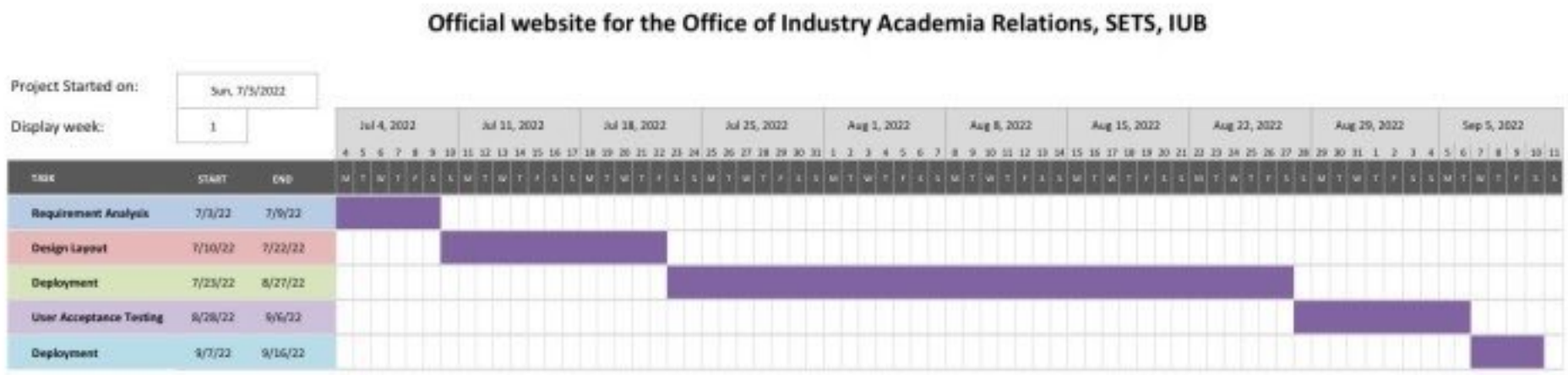


Figure 3.4: Gantt Chart

3.4 Activity wise Resource Allocation

Resource allocation is the process of allocating resources in a way that supports team goals. Having the right resource at the right time is essential to the success of the project. The table shows the employees assigned to this project.

Serial No.	Position	Input(months)
1	Research Coordinator	3
2	Intern	3
3	Intern	3

Table 3.1: Activity wise Resource Allocation table

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3.5 Estimated Costing

The estimated cost of "OIR WEBSITE" is associated with several services. The development of the project before handing it over to the office The estimated cost is about three hundred thousand. An approximate cost of the system is given below. It can be extended to software changes and keeps itself up to date.

Serial No.	Position	Staff Month Rate	Input (months)	Sub Cost (BDT)
1	Research Coordinator	40000	3	120,000
2	Interns	30000 (15*2)	3	90,000
Sub-Total				2,10,000
Reimbursable Expenses				30,000
Total without VAT				2,40,000
VAT 4.5%				10,800
Total with VAT				2,50,800

Table 3.2: Estimated Costing

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Chapter 4

Methodology

We have worked in an agile environment. To choose the agile framework to adopt, we apply the Extreme Programming (XP) technique. It helps teams produce high-quality software quickly while also adjusting to changing demands. Extreme Programming is built on five ideas, and we choose to use it for those reasons, as well as other advantages:

1. We needed to make sure that the crew and management were on the same page. Nothing was to be misconstrued or misrepresented in any way.XP stresses the need for effective team communication, which may be accomplished through team meetings and debates.

2. Things have to be kept as simple as possible. As a consequence, we were able to make quick modifications. We were also able to keep our meetings short, concise, and to-the-point as a result of it. The system's designs should also be basic, neat, and comprehensive, suggesting that just the bare minimum should be accomplished and that it should be clean and simple to maintain, support, and alter.

3. Feedback was heavily appreciated during the development process. The relevance of client feedback was crucial. Prototypes provided fantastic feedback, allowing us to improve our



Figure 4.1: Agile Methodology

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work. Feedback on completed efforts and activities helps the team find areas for growth while also bolstering the simple ideas.

4. Everyone in the firm held each other with high respect. Every decision and suggestion was given the utmost consideration and, if required, constructive criticism. Team members must respect one another in order to communicate with one another, express and accept criticism, and collaborate on basic thoughts and solutions.

5. We were constantly told that we should be brave. To think outside the box and try out new implementation methods in order to improve the speed and efficiency of activities.

6. Because of the usage of XP, we were able to accomplish our Assignment quickly while still satisfying the demands of the user at each level.

7. We had a better grasp on the project because of the regular meetings.

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Chapter 5

Body of the Project

5.1 Work Description

The website helps build your image by letting the public know who you are and what you stand for. We know that all websites contain a description and all information related to that particular company, organization or office. On this website that we have created, we have tried to collect all the information about our office that will help people to learn about the office. People will learn what is going on in the office, what events are held and what the possible outcomes are. Even they can see the reports on each organized program.

This website consists of different modules. These are:

1. **Home page:** In the very first phase, users see the homepage where they can see brief information about the desktop. You get an overview of other pages and events as well as photos from the gallery. Here you can choose what you want to see in more detail.

2. **About us:** All office information is stored here in detail. The missions and objectives of the office are also described here. So that people can understand the office in detail

3. **Events:** All the events organized by the agency are described. People can see the events in detail and also get the event reports there. Not only can they see the output of events

4. **Gallery:**People can see all the photos of officials and guests when an event is organized and get to know the officials and people who attended the event.

5. **Contact us:** People who visit the website will receive the contact details in this section. They can connect by email or phone number as indicated in the contact section. Not only can they visit the office in person using the location provided as a Google Map.

6. **Login:** Here the administrator enters the required email and password and can log in to make any type of changes

7. **Change Password:** Here the administrator has to enter the old password and enter the new password to change the password.

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8. **Manage Event:** This section allows the administrator to add various upcoming events, edit previously updated events, and even delete event information if needed.

9. **Manage Member:** Member information is updated here. If necessary, each new member can be added or removed from a previously added member.

10. **Edit OIR website information:** Any OIR information can be updated or changed here

11. **Add images to gallery:** To add images to gallery, admins need to be here after login.

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5.2 Requirement Analysis

Rich Picture

Rich picture helps to understand the complexity of the environment in which the development intervention is operating, providing a spatial overview of the situation. Below is the rich picture of our system.

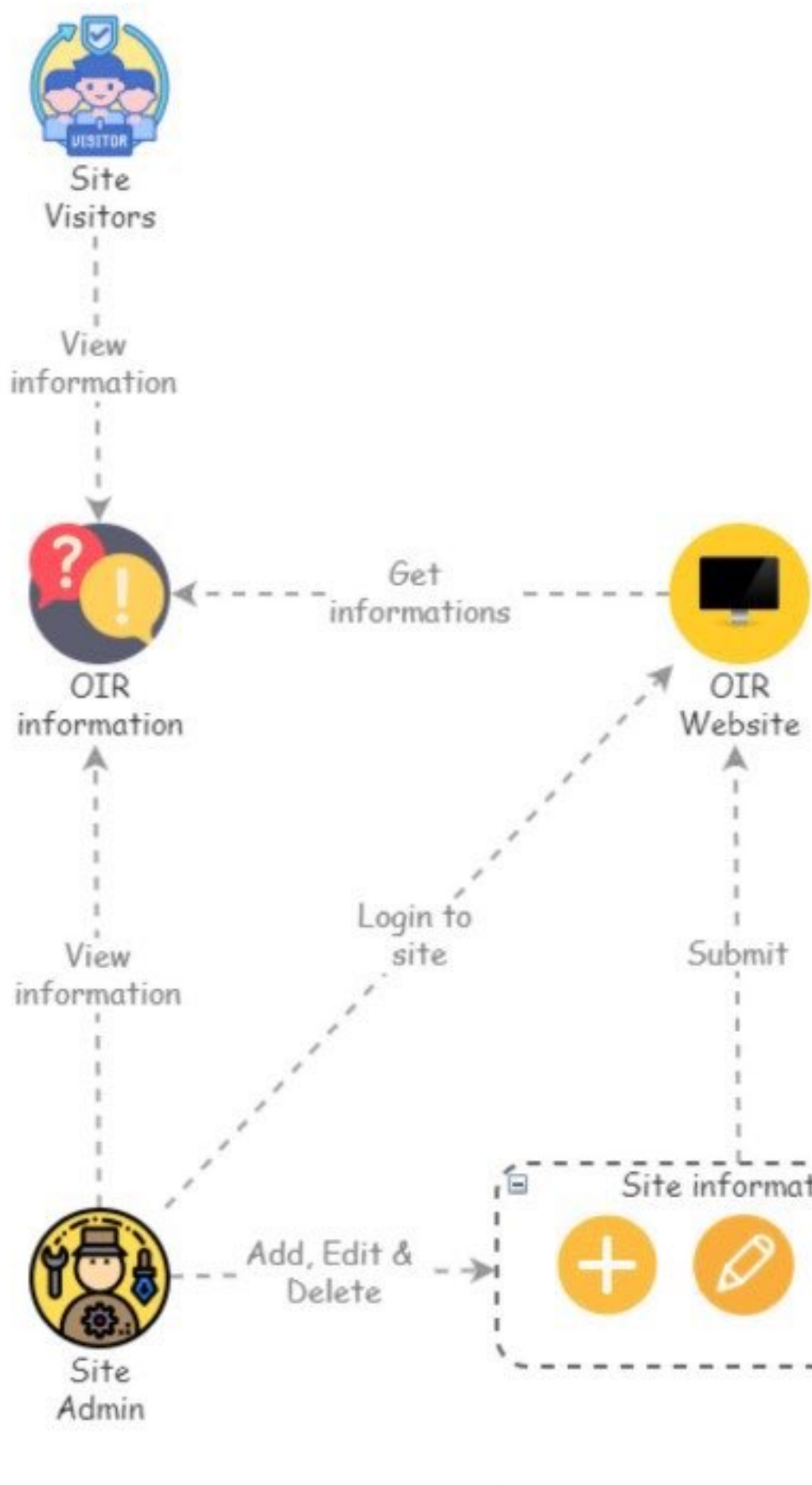


Figure 5.1: Rich Picture

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Functional and Non-Functional Requirements

Our system has the following functional requirements:

Function: Add new Event		
Input: Title, Date, Description and images	Process: Add new event	Output: Added new event to the database
Precondition	Only administrators may login and add to the system, and they must do it as administrators.	
Postcondition	A notification of the stored result will be sent	

Table 5.1: Functional Requirement add new Event

Function: Edit event information		
Input: All the information that needed to be update	Process: Change the old information with the new ones.	Output: The database will be updated with the new information.
Precondition	Only administrators may login and add to the system, and they must do it as administrators.	
Postcondition	A notification of the stored result will be sent	

Table 5.2: Functional Requirement edit event information

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Function: Delete an event		
Input: Event id	Process: Delete an event.	Output: Selected event will be deleted from database
Precondition	Only administrators may login and add to the system, and they must do it as administrators.	
Postcondition	A notification of the result will be sent	

Table 5.3: Functional Requirement delete event

Function: Add image to gallery		
Input: Caption and image	Process: Add new image to the image gallery	Output: Added new image to the database
Precondition	Only administrators may login and add to the system, and they must do it as administrators.	
Postcondition	A notification of the stored result will be sent	

Table 5.4: Functional Requirement add image to gallery

Function: Delete an image from gallery		
Input: Gallery image id	Process: Delete an image from gallery.	Output: Selected image will be deleted from database
Precondition	Only administrators may login and add to the system, and they must do it as administrators.	
Postcondition	A notification of the result will be sent	

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The system will have the following non-functional system requirements:

1. The system will be very secure as only authorized users is allowed access to the system
2. The system will be fast providing users with utmost performance
3. The system will be intuitive so that users can easily navigate through the system
4. The system will be responsive and follow the mobile first approach
5. The system will be very reliable with almost zero downtime unless maintenance take place

It is a process of planning a new business system or replacing an existing system by defining its components or modules to satisfy the specific requirements. Before planning, you need to understand the old system thoroughly and determine how computers can best be used in order to operate efficiently.

5.3 System Analysis

5.3.1 Six Element Analysis

Process	System Roles					
	Human	Non-Computer Hardware	Computing Hardware	Software	Database	Communication and Network
Add, Edit, Update Event	Admin (Admins have already been pre-registered in the system.)	For keeping track of needs and identifying difficulties, use a pen and paper or a pdf.	Desktops, Laptops, Smartphones	Web Browsers, VSCode, Git, Discord: To test the system, note taking, documentation, and collaboration with team	SQLite	WAN/LAN to visit the website

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Manage Gallery	Admin (Admins have already been pre-registered in the system.)	For keeping track of needs and identifying difficulties, use a pen and paper or a pdf.	Desktops, Laptops, Smartphones	Web Browsers, VSCode, Git, Discord: To test the system, note taking, documentation, and collaboration with team	SQLite	WAN/LAN to visit the website
Change Password	Admin (Admins have already been pre-registered in the system.	For keeping track of needs and identifying difficulties, use a pen and paper or a pdf.	Desktops, Laptops, Smartphones	Web Browsers, VSCode, Git, Discord: To test the system, note taking, documentation, and collaboration with team	SQLite	WAN/LAN to visit the website

Table 5.5: Six element analysis

5.3.2 Feasibility Analysis

Before the onset of the development of the website of Office of Industry Academia Relations, SETS, IUB a very important preliminary study was done to find out a key outcome, that is, is this project feasible? By conducting a feasibility analysis, it allowed us to create a comprehensive report on what are the strengths, weaknesses, opportunities, and threats for this project.

- **Technical feasibility:** Technically, this project is safe and sound. It does not require any fancy hardware or anything. The system is developed with state-of-the-art web technologies, and because of that, it checks all the system requirements.
- **Legal feasibility:** This system complies with all the laws of cyber-security.
- **Operational feasibility:** A website serves as a great way of branding. In 2022 where

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people are very much relaying on internet, it is a compulsory need for an office to have their own online identity and there is not any better way of doing so except through a good website. Visitors will be able to know about the office, the activities they are doing and can find a way to communicate with them. This site will help people as well as the office to let others know about them.

- **Economic feasibility:** This system does not excessive moderation. Also, as this project was developed using open-source technology no additional funding was needed for development.

5.3.3 Problem Solution Analysis

While developing the system using established tools and techniques helps us to improve our approach to solving the problems that our team and our organization face. There are four fundamental steps to problem solving:

1. A description of the problem.
2. Construct alternatives.
3. Examining and selecting a substitute.
4. Put the ideas into practice.

We had encountered some problems that were halting our progress. But we brainstormed and overcame these issues with those four steps. The major problem was selecting the framework and technologies. Now a days there are many technologies available to build a website, choosing the right technique among all those available options was tough job. Also, as we were not expert in python, we had some issues while initiating the project but with the ongoing time we were able to cope up with the difficulties and were able to complete the work on time.

5.3.4 Effect and Constraints Analysis

Our Approach is to Build a website where all the information related to office will be available.Not only that after the publish of the website all the information can be monitored and updated whenever required.When the website will be published information related to future events can be released earlier for the people so that they can be informed and keep updates regularly.

5.4 System Design

It is a process of planning a new business system or replacing an existing system by defining its components or modules to satisfy the specific requirements. Before planning, you need to understand the old system thoroughly and determine how computers can best be used in order to operate efficiently.

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UML Diagrams

Use Case Diagrams: A use case diagram is a way to summarize details of a system and the users within that system.

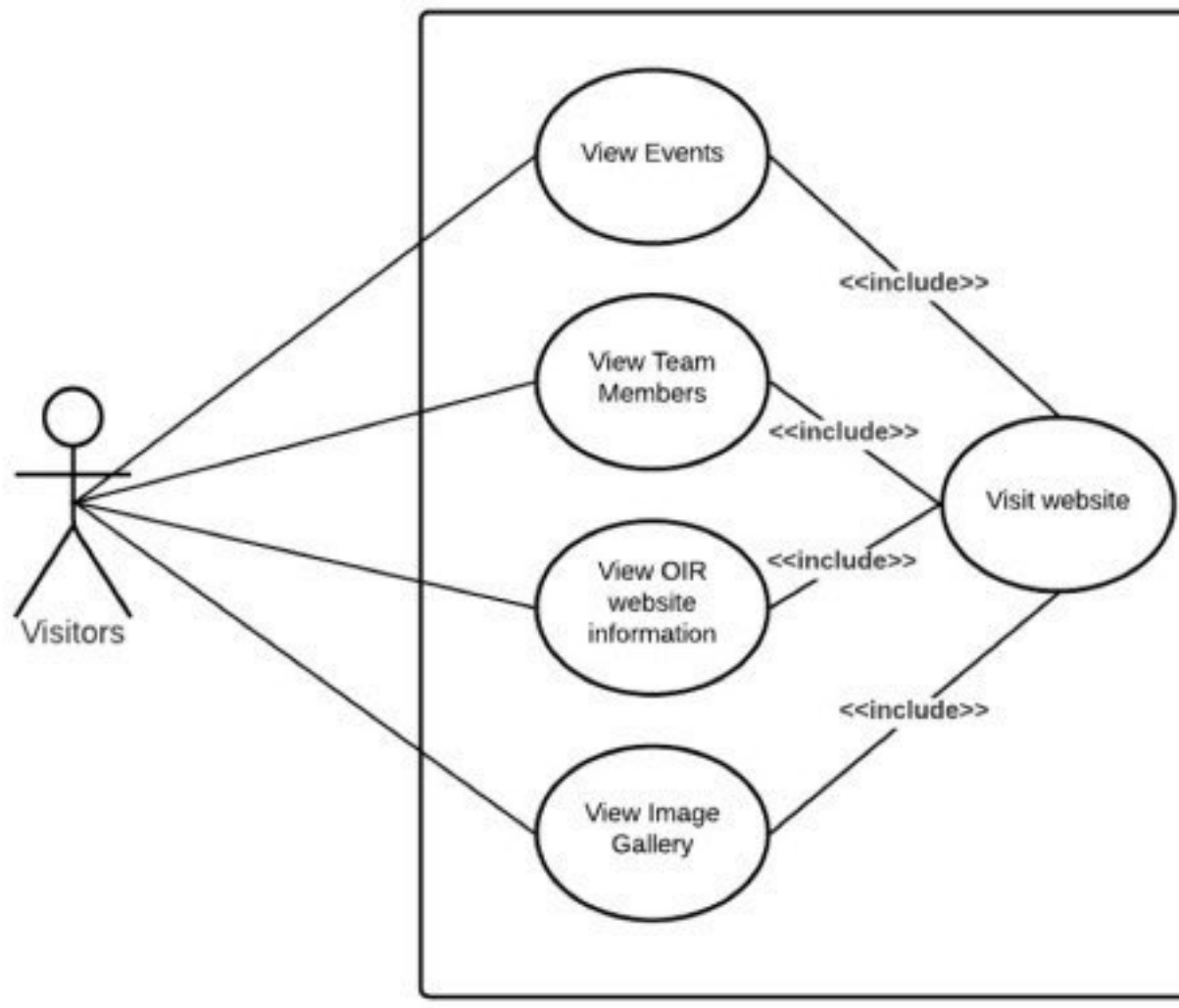


Figure 5.2: Use case diagram of site visitors

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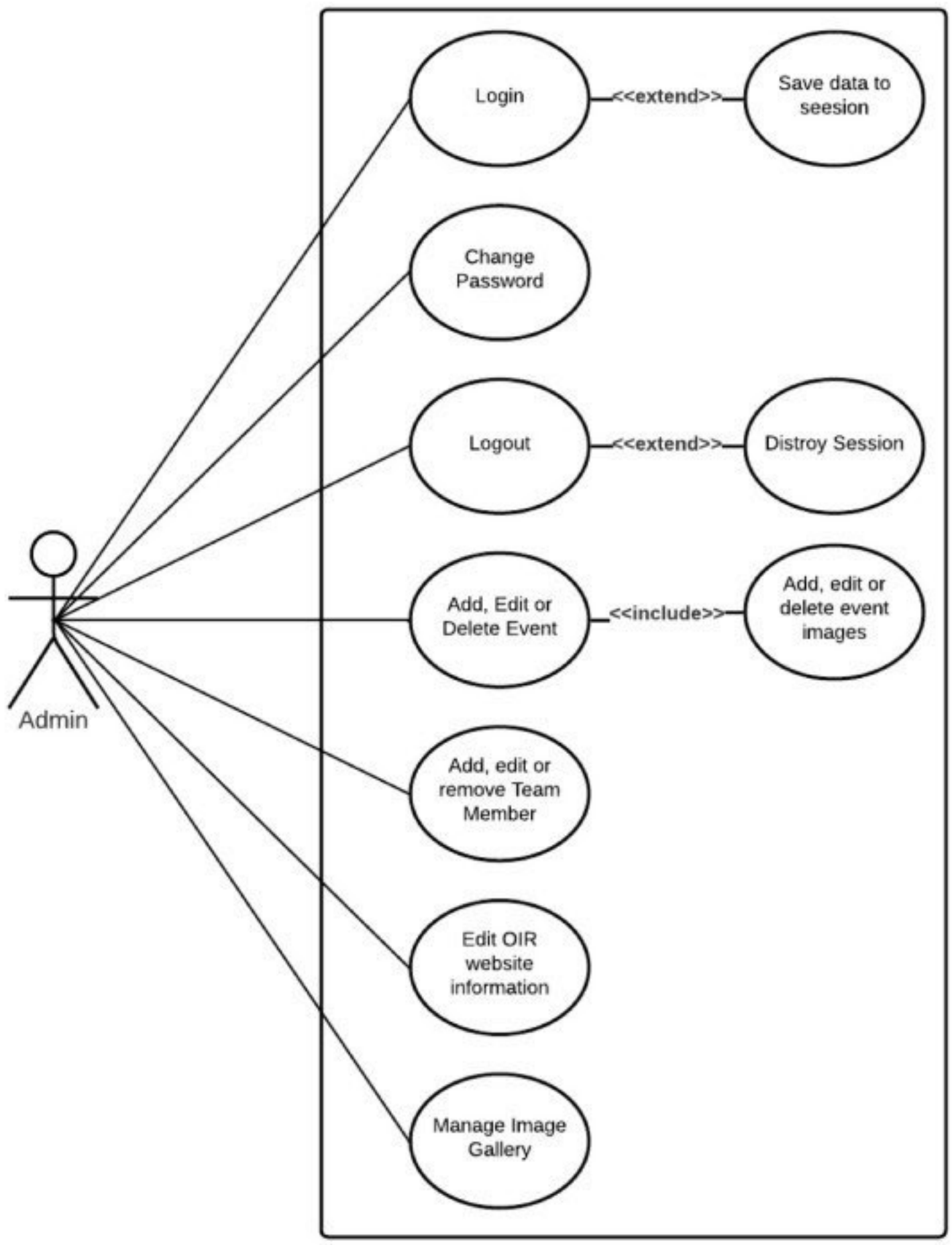


Figure 5.3: Use case diagram of site admin

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

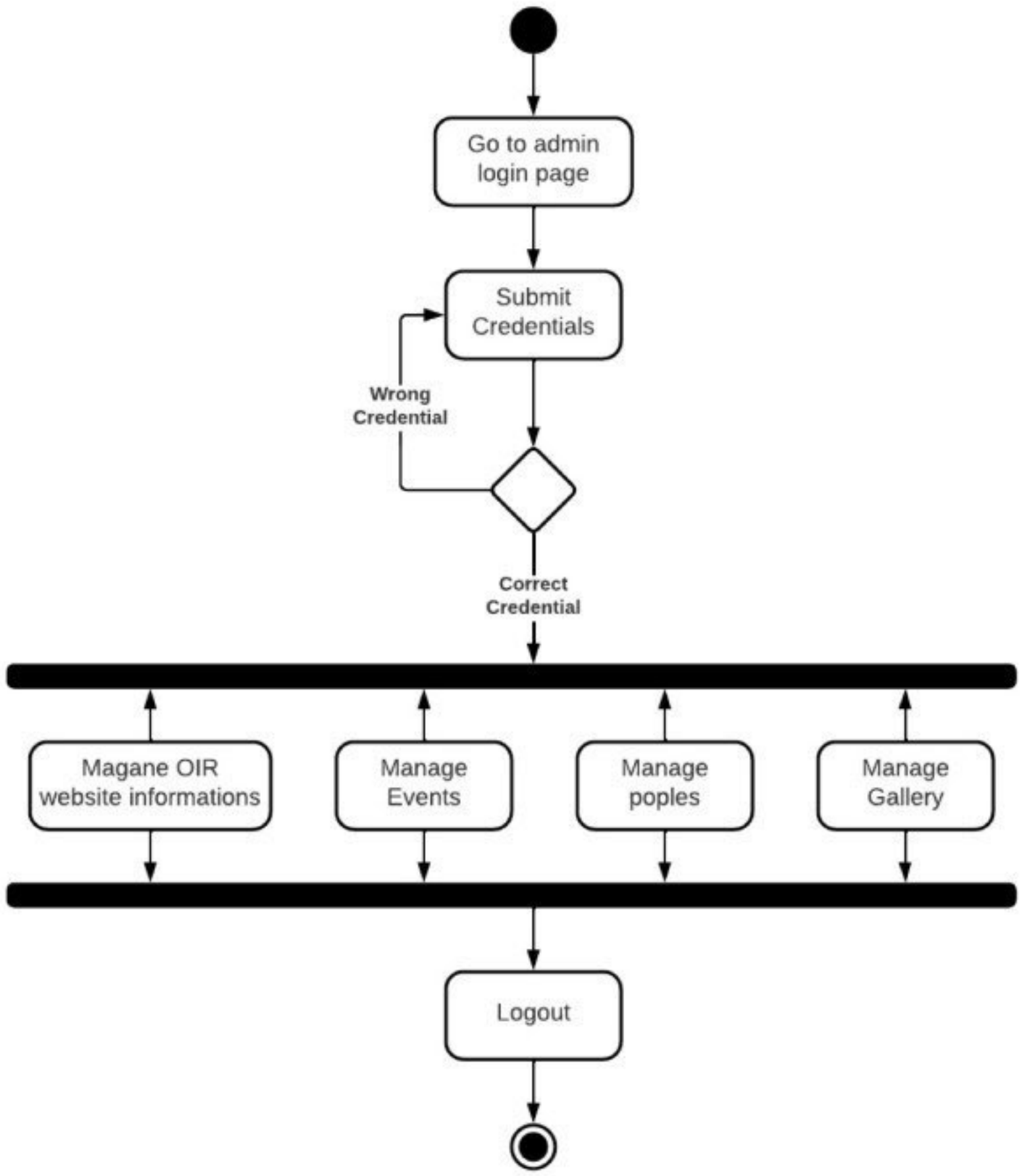


Figure 5.4: Activity diagram of site admin

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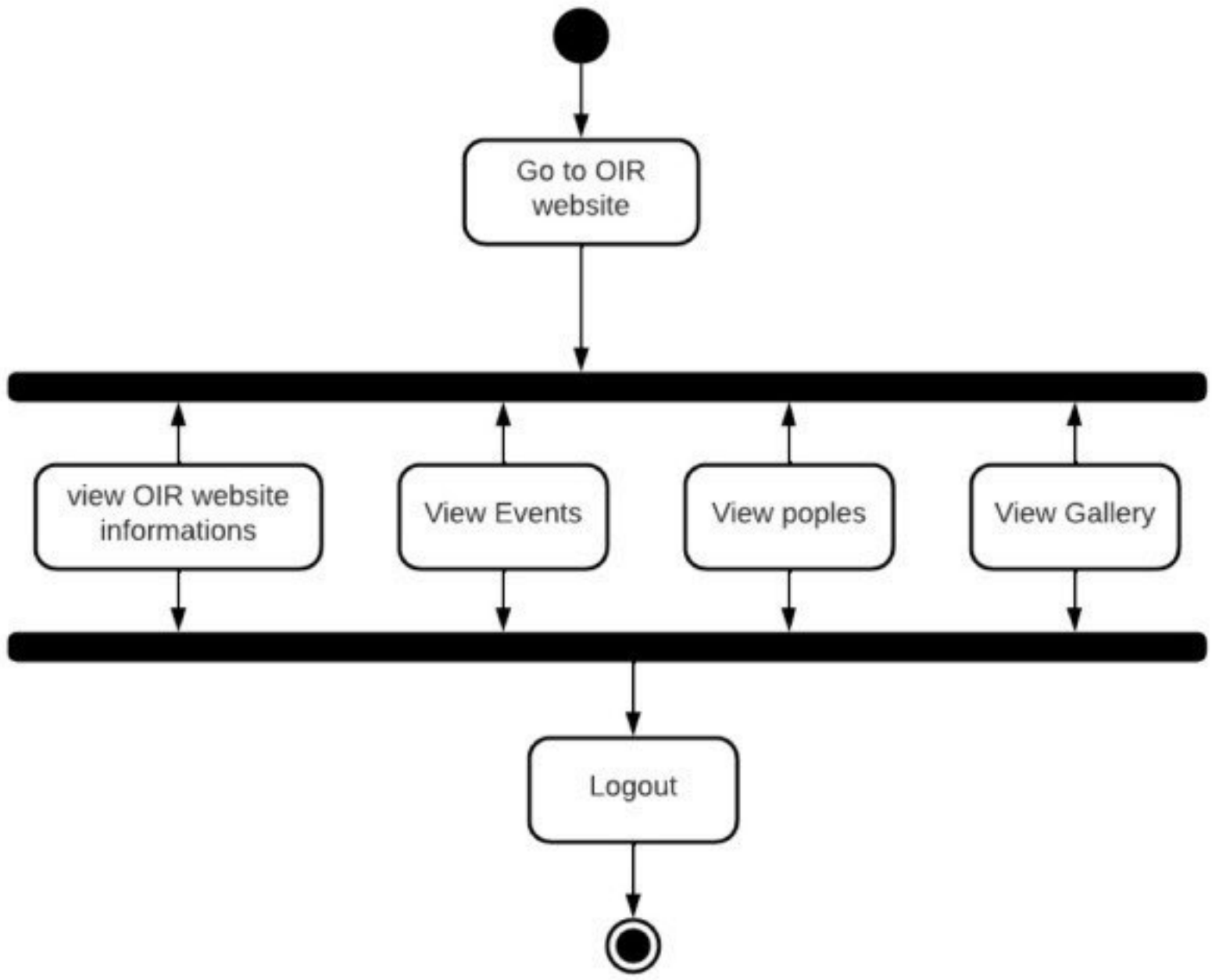


Figure 5.5: Activity diagram of site visitors

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Class Diagram: The class diagram depicts a static view of an application. It represents the types of objects residing in the system and the relationships between them.

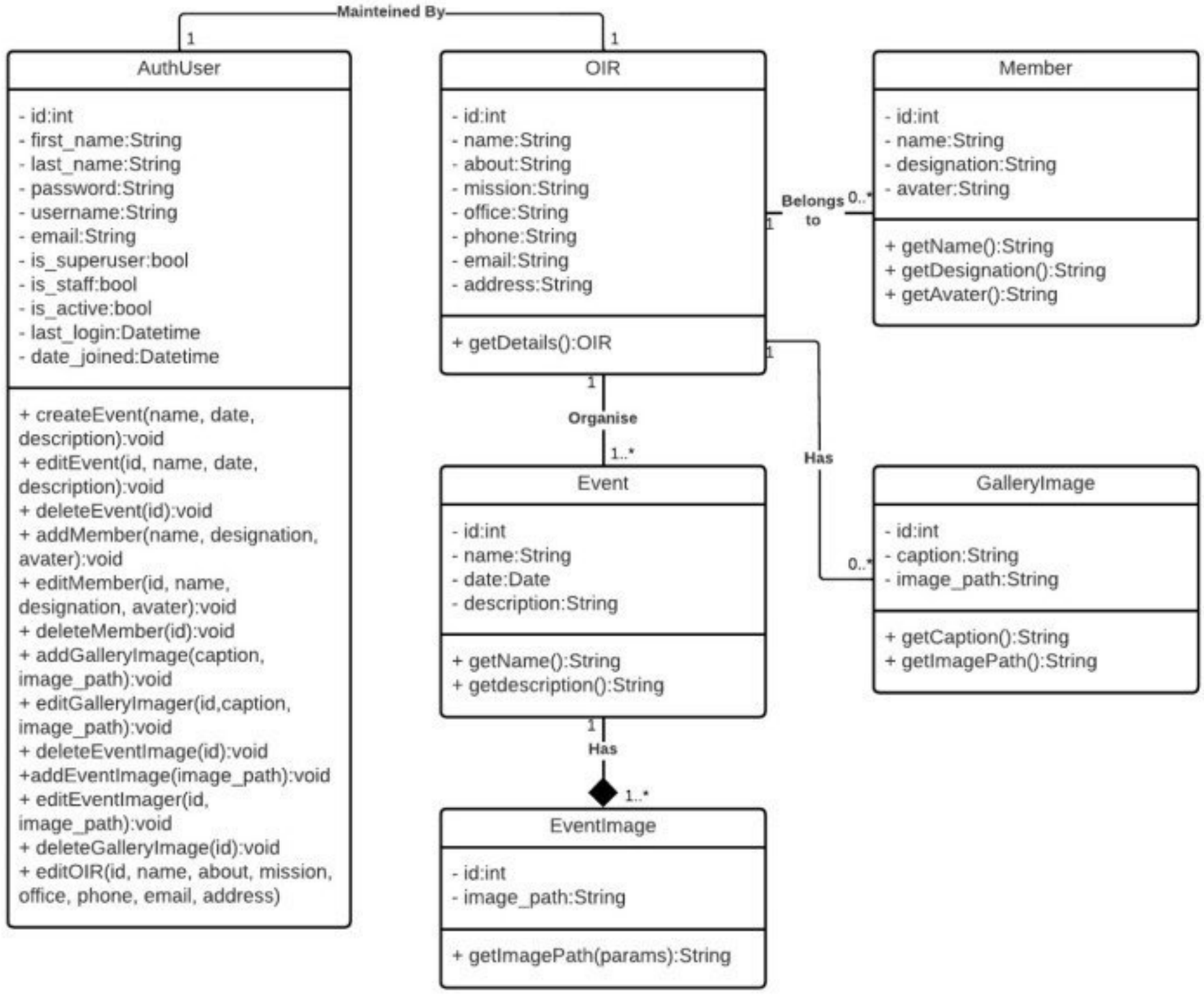


Figure 5.6: Class diagram

Architecture

Architecture serves as a blueprint for a system. It provides an abstraction to manage the system complexity and establish a communication and coordination mechanism among components of the website of Office of Industry Academia Relations, SETS, IUB follows the MVT (Model View Templet) model. In MVT, the model serves the purpose as a interface of the data. It act as a logical data-structure throughout the entire application and it is represented by a database. In our case us have used SQLite as database. The view is the user interface that is rendered to the client when they hit a URL. View is consists of HTML, CSS and Java Script. Template is the static part of view along with some special syntax which describes how dynamic content will be inserted to the site. Here the diagram clearly illustrates that user can only see and interact with the view, the view receives the request or commands from the users

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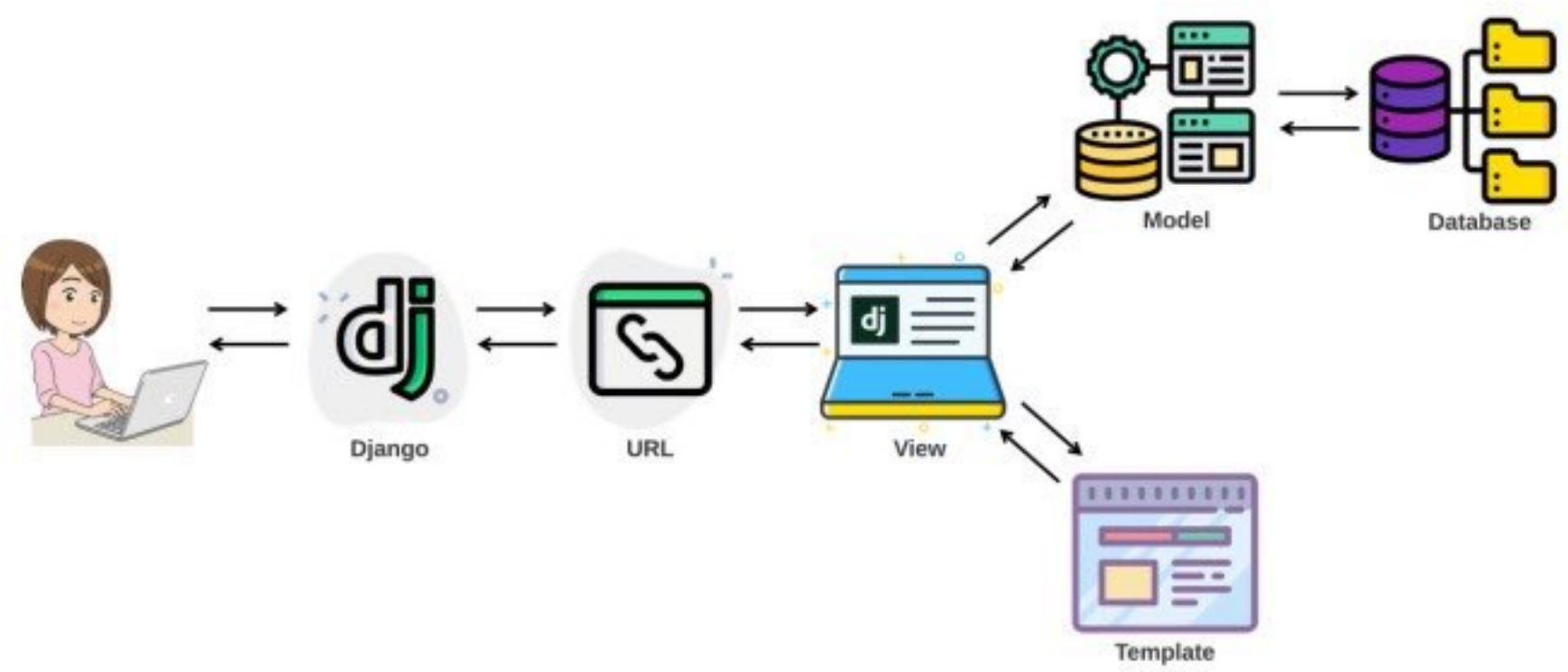


Figure 5.7: MVT Architecture

and transfer it to the web server, which then retrieves and stores data from the file system and database accordingly and put the data to the template. Then the template is rendered to give a complete view for the users as a response.

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5.5 Implementation

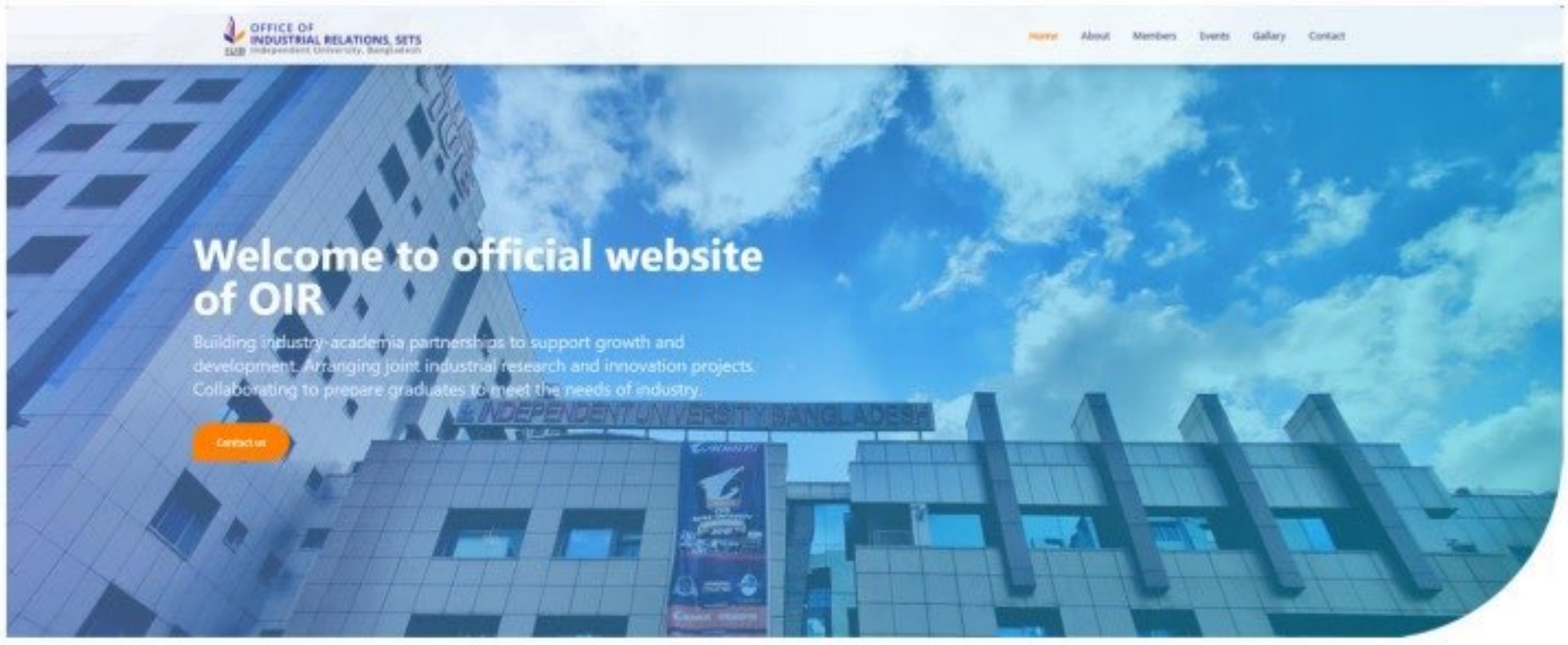


Figure 5.8: Homepage Hero Section



Figure 5.9: Homepage About Section

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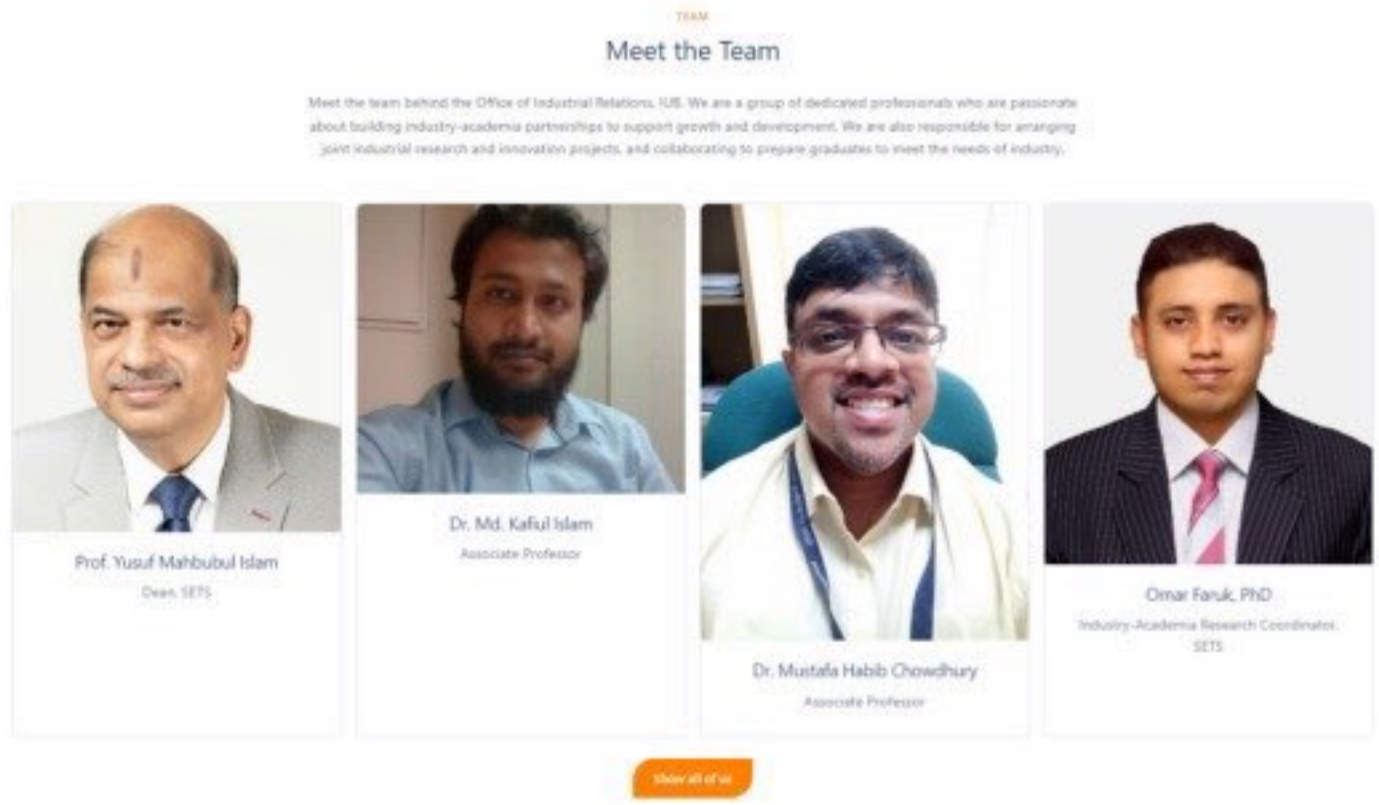


Figure 5.10: Homepage Team Section

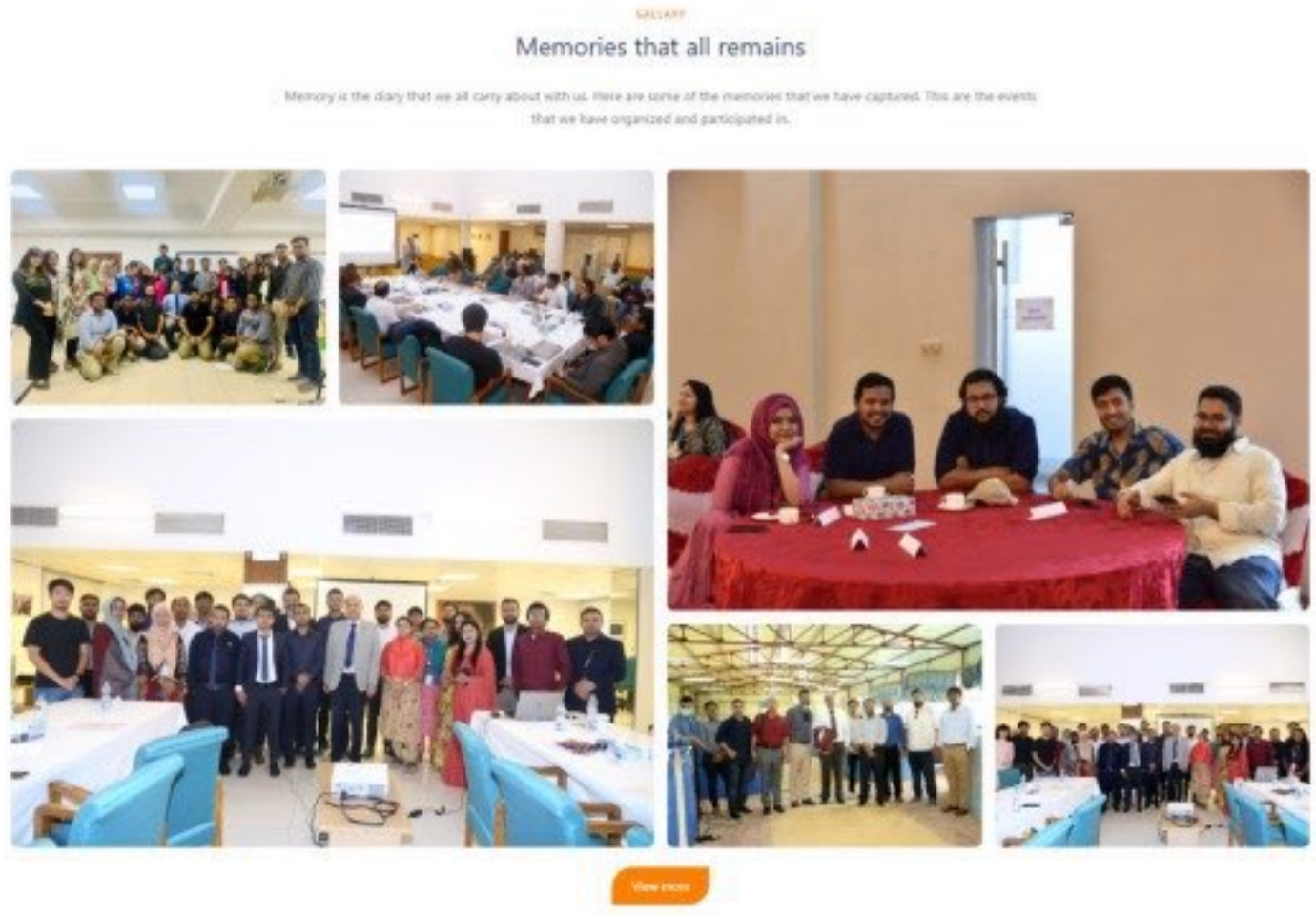


Figure 5.11: Homepage Gallery Section

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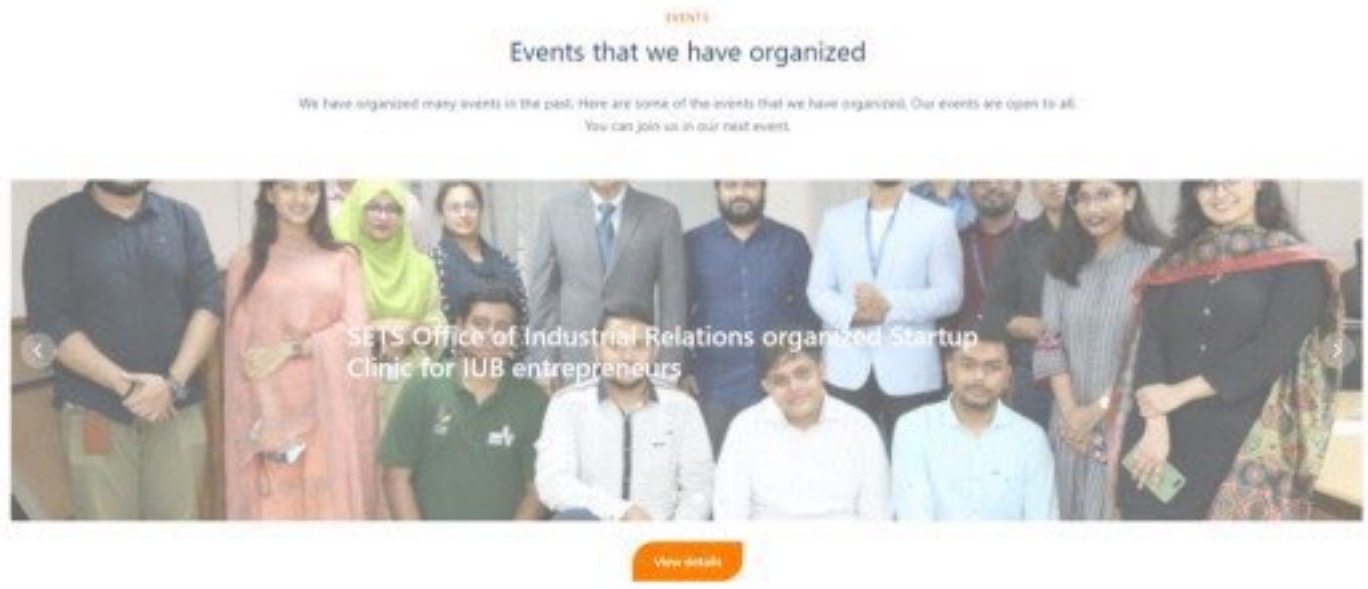


Figure 5.12: Homepage Events Section

Figure 5.13: Homepage Contact Section

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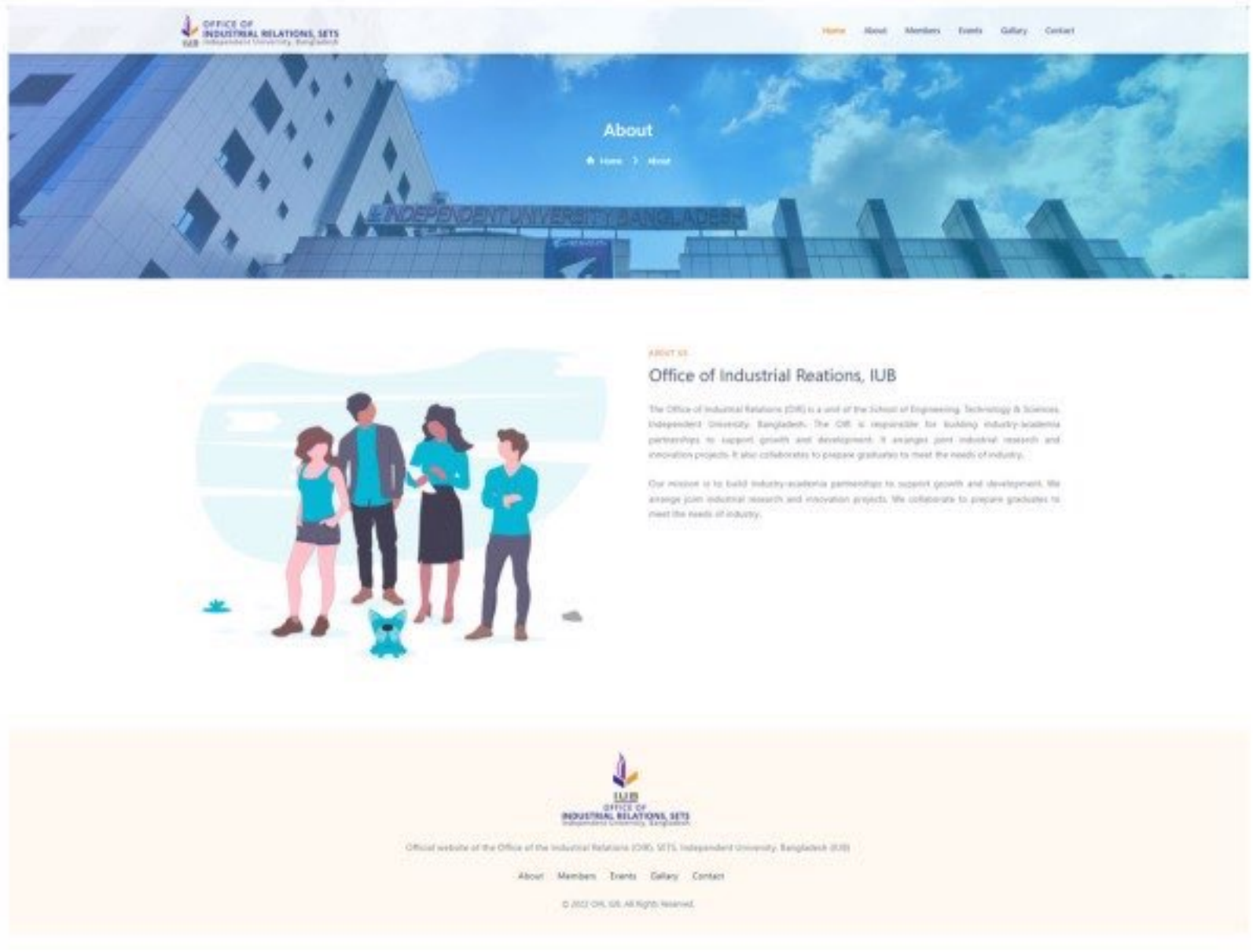


Figure 5.14: About page

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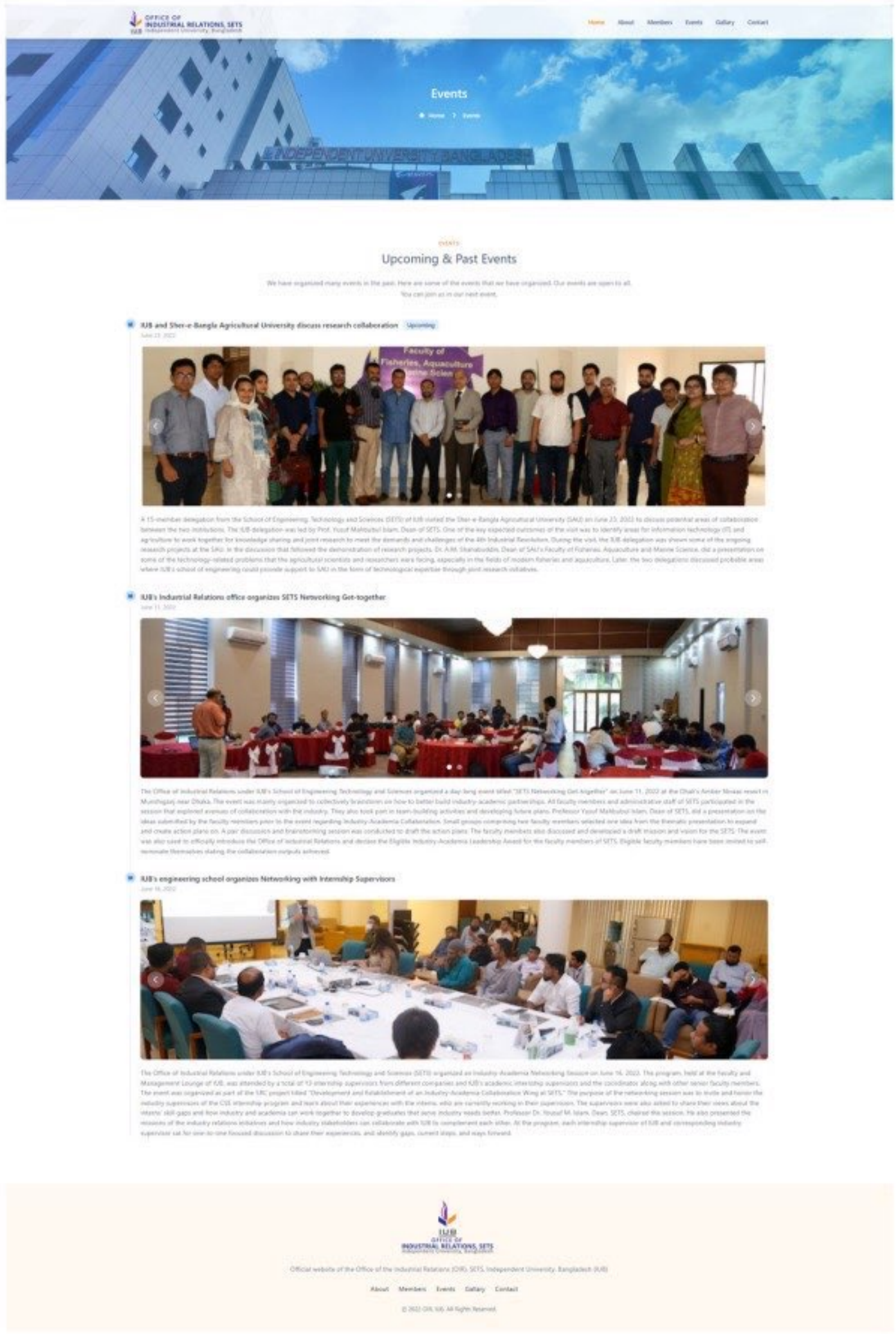


Figure 5.15: Events page

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Figure 5.16: Gallery page

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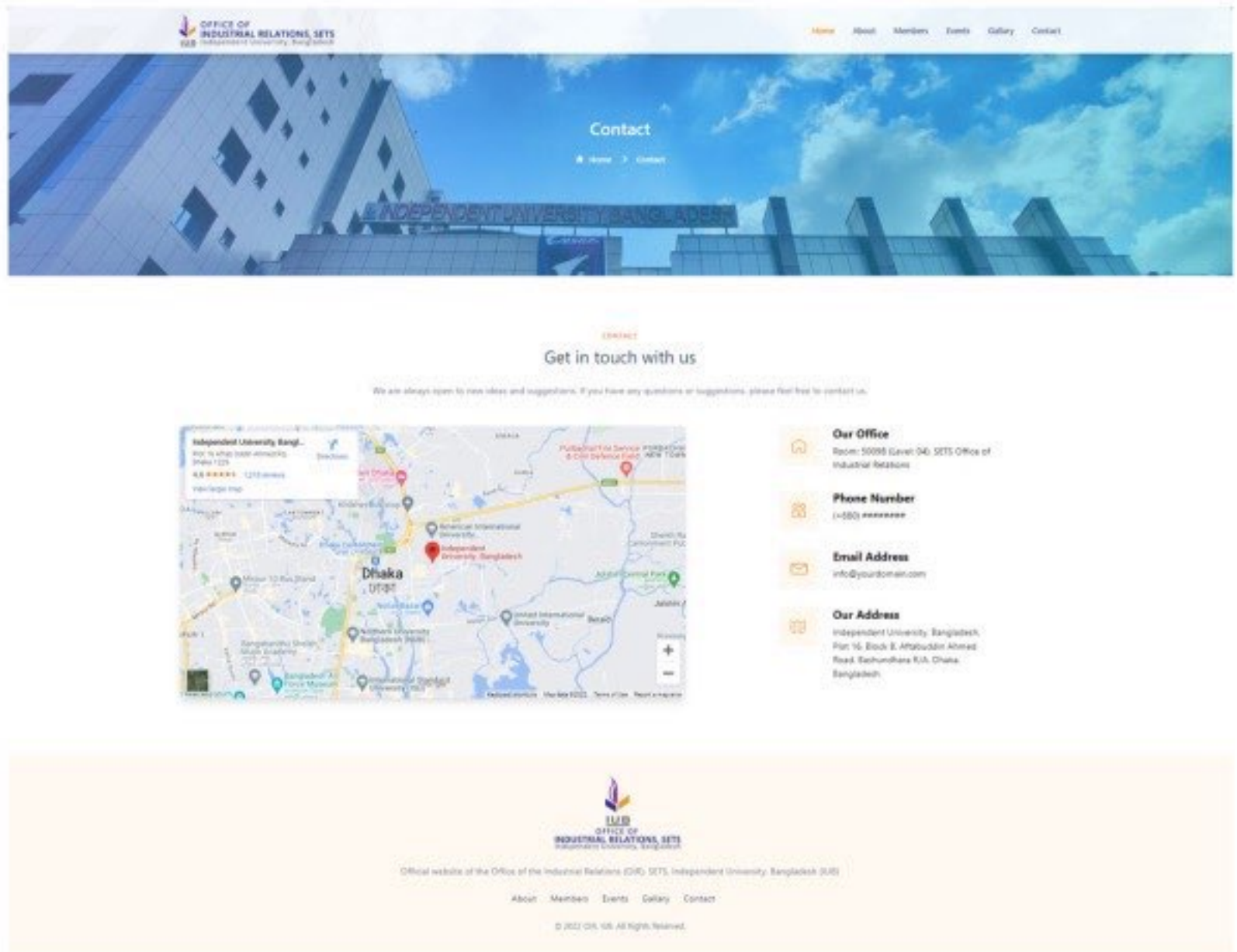


Figure 5.17: Contact page

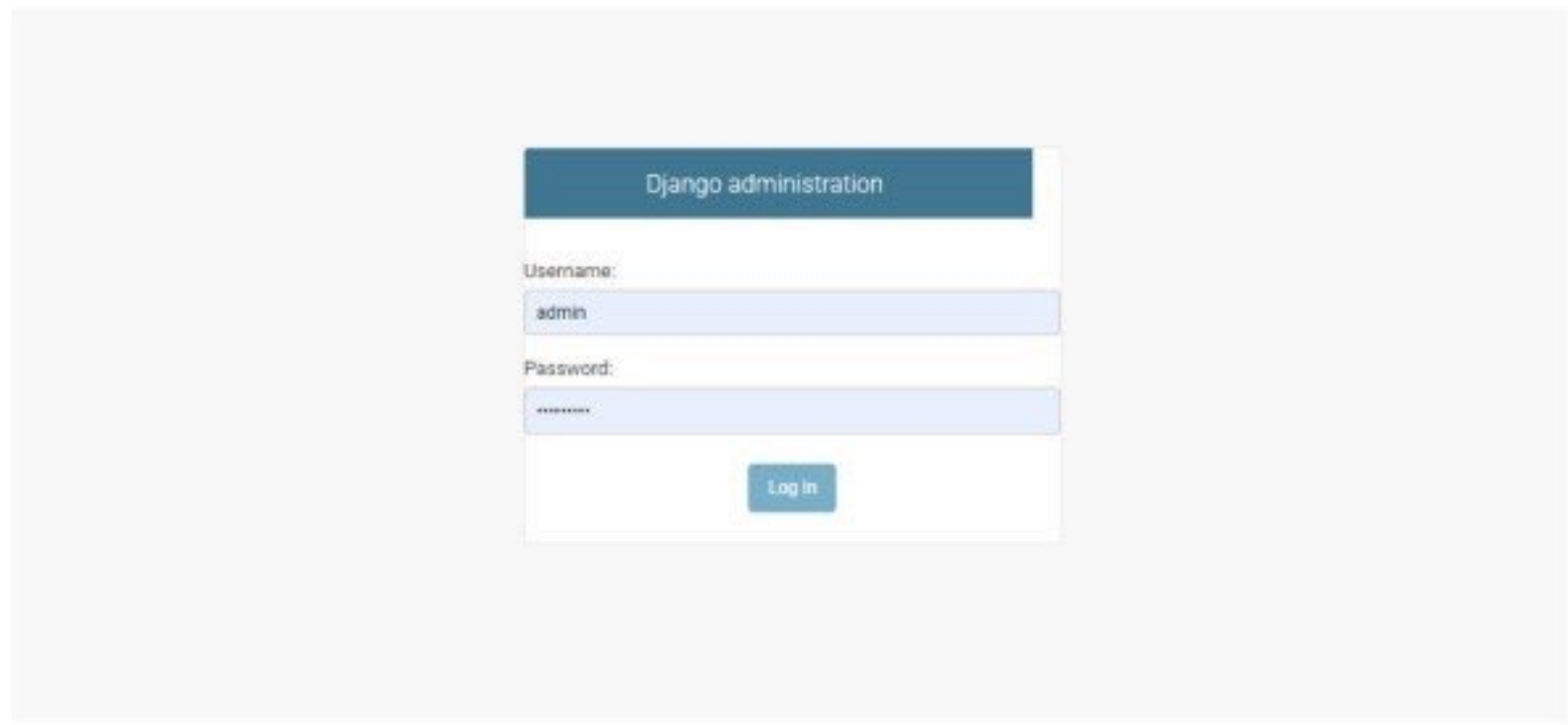


Figure 5.18: Admin Login page

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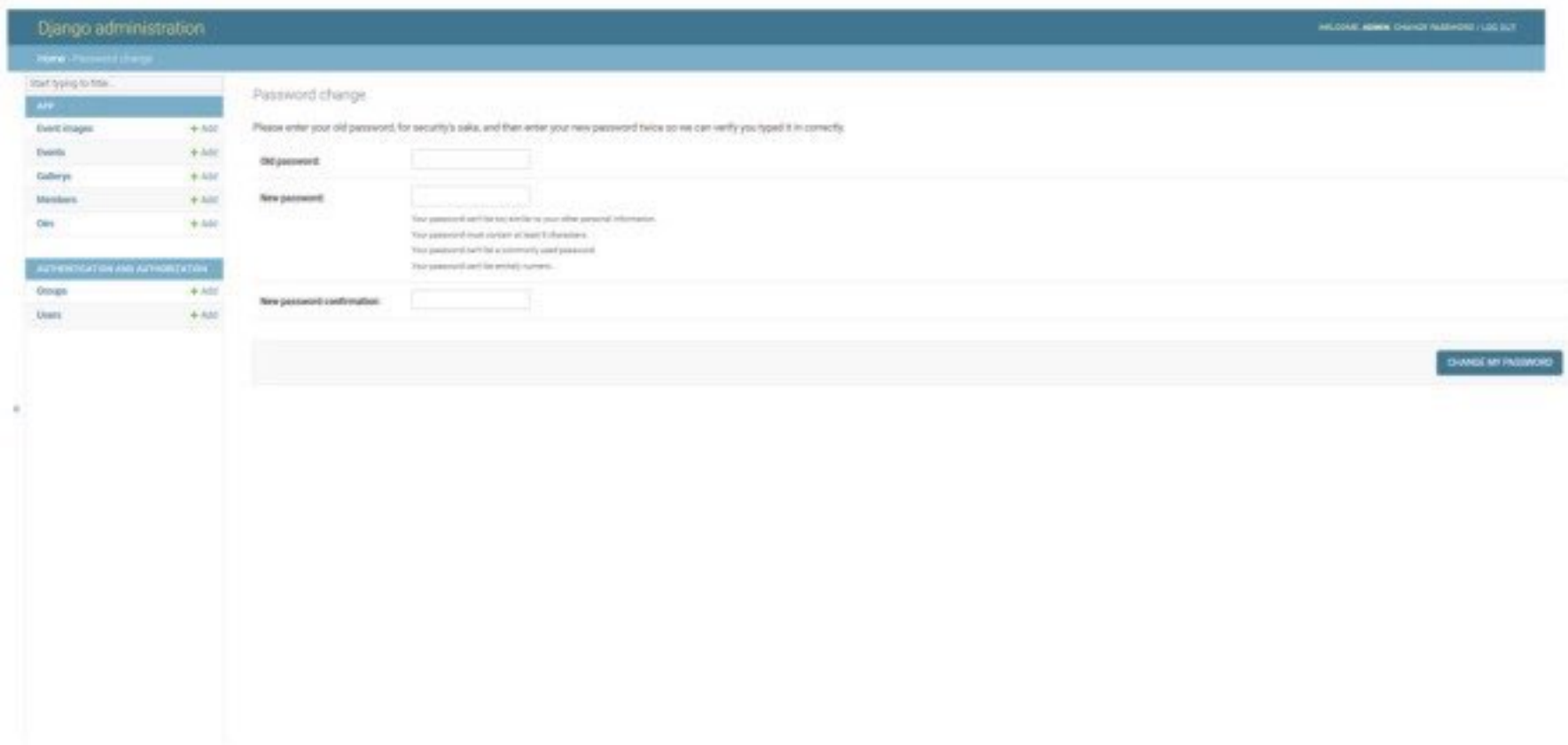


Figure 5.19: Admin Change Password page



Figure 5.20: Admin Dashboard

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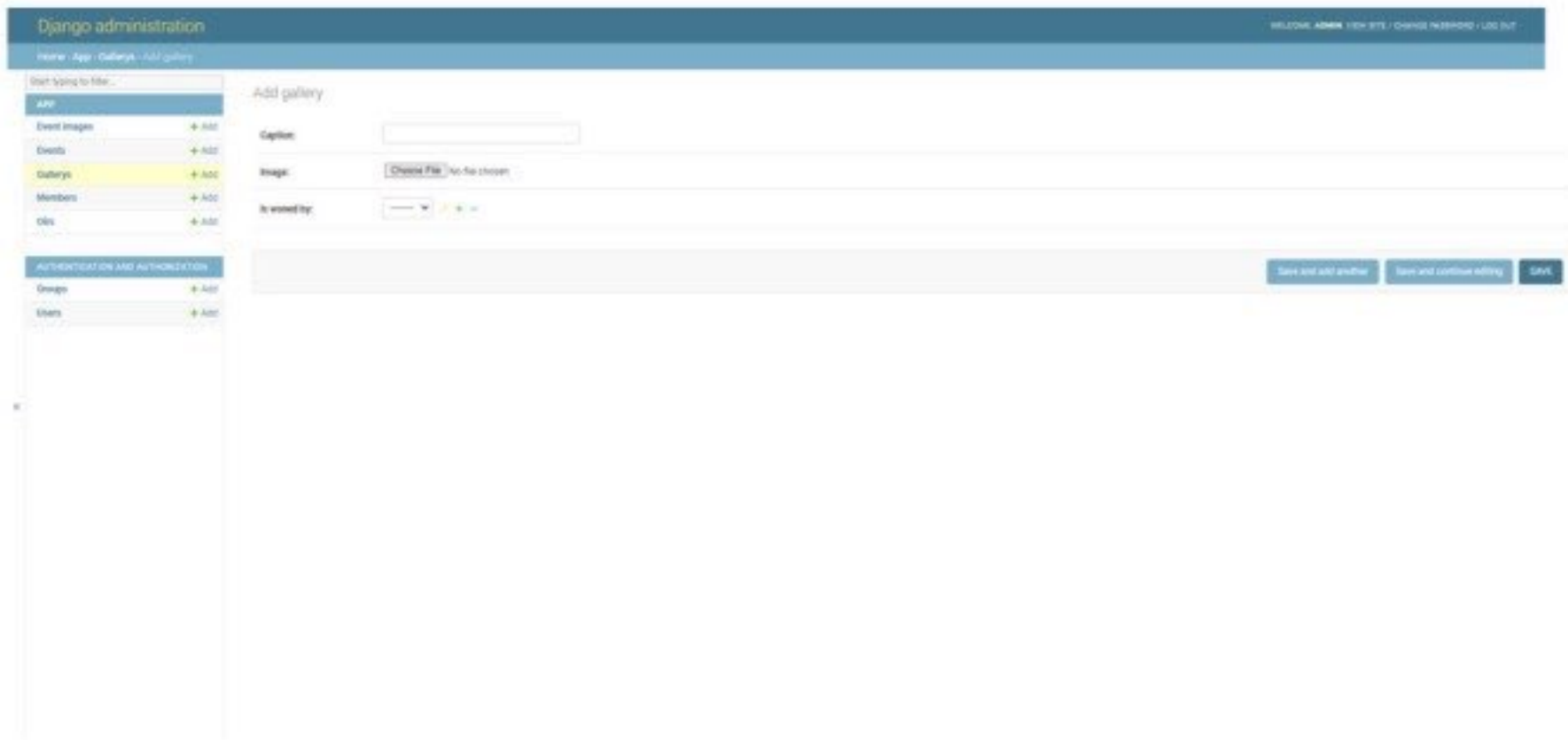


Figure 5.21: Admin add image to gallery

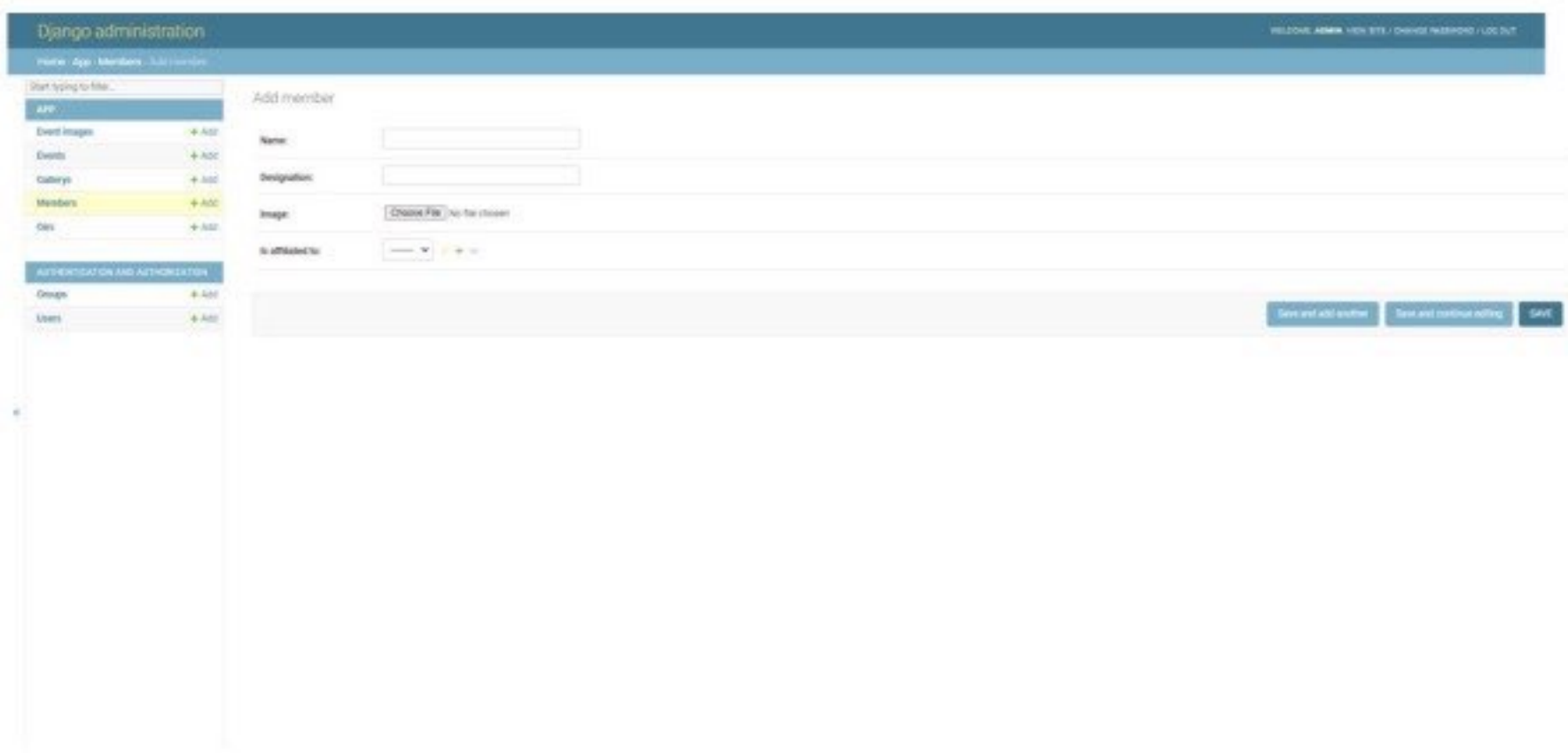


Figure 5.22: Admin add member

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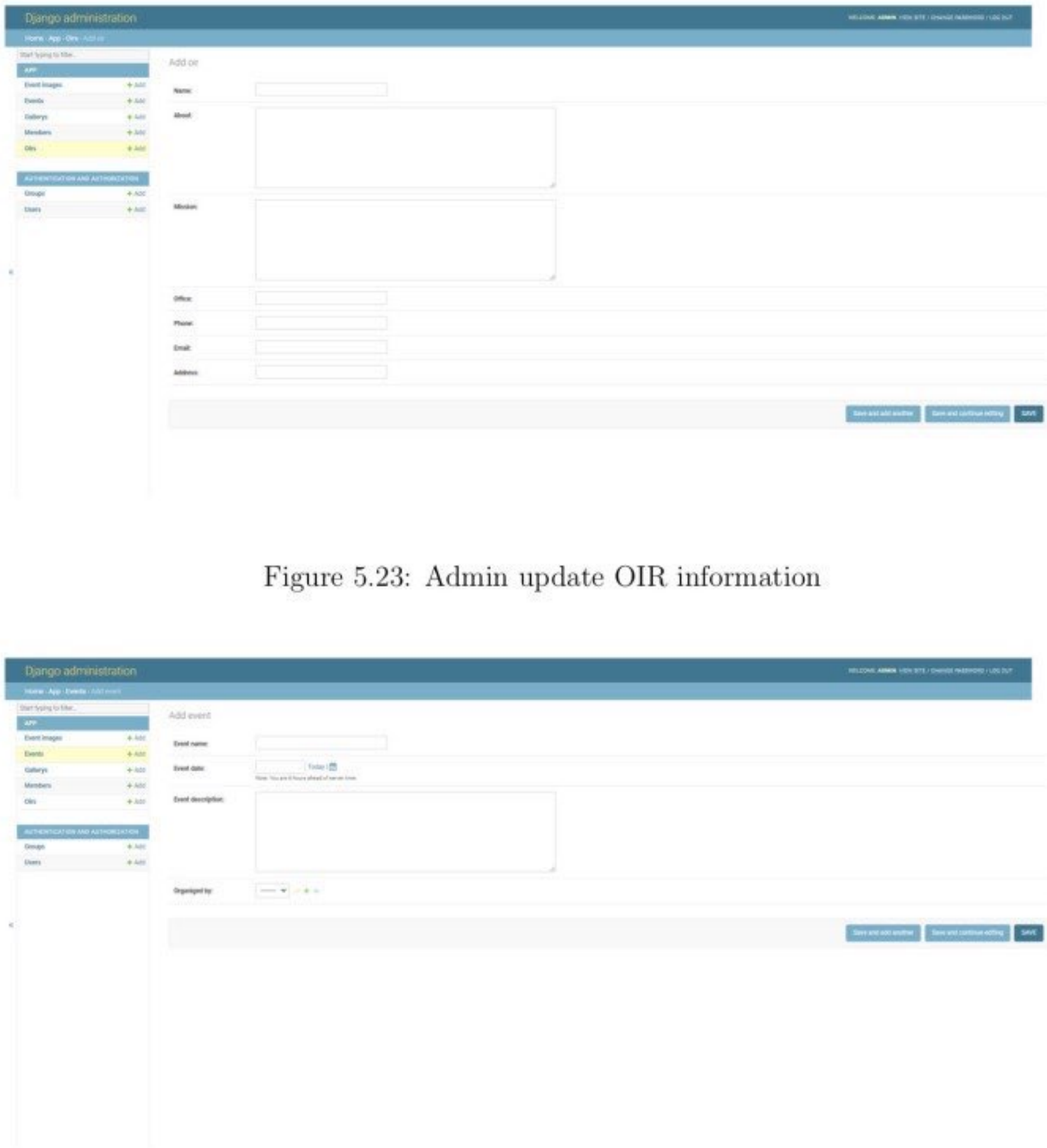


Figure 5.23: Admin update OIR information

Figure 5.24: Admin add event

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5.6 Testing

Test Case ID	Test Scenario	Test Steps	Pre-requisites	Test Data	Expected/ Intended Results	Actual Results	Test Status – Pass/ Fail
#Q01a	Add new event	Fill up the input fields with the event information.	Must be logged in as admin.	All requirement information	Event will be added to database and Update will be reflected on the website.	As Expected.	Pass
#Q01b	Add new image to gallery	Fill up the input fields caption and image.	Must be logged in as admin.	Caption and Image	Image will be added to database and Update will be reflected on the website.	As Expected.	Pass
#Q01c	Remove an event	Select the event and from dropdown action select delete	Must be logged in as admin.	Event id	Event Will be deleted from the database and update will be reflected on the website.	As Expected.	Pass
#Q01d	Remove an image from gallery	Select the image and from dropdown action select delete	Must be logged in as admin.	Image id	Image Will be deleted from the database and update will be reflected on the website.	As Expected.	Pass

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#Q01e	Edit event information	Select the event and from dropdown action select edit	Must be logged in as admin.	All requirement information	Information Will be edited in the database and update will be reflected on the website.	As Expected.	Pass

Table 5.6: Testing

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Chapter 6

Results & Analysis

While testing the program, there were several issues. This was a minor issue that we were able to resolve. After the resolving of these issues, test cases were documented. Testing methodologies have been used to justify all test cases. We did our testing on a local server. We'll test everything on the hosting again after it goes online. As a result, various modifications may occur at that time. There are few integration's possible. But it will be added in the future. So, all the tastings are not done. But up to the current feature available, all the testing is done, and it is running fine. But live testing with users is not done.

6.0.1 Software Testing

Software testing determines the security, accuracy, and quality of new software. Authorization refers to the process of verifying that computer software is tailored to the needs of clients. The main goal of software testing is to find bugs in the program.

The figure below shows the results of tasks that I have worked on. Each of the tasks is only provided if and only if it meets the requirements successfully.

Test ID	Test Case	Test Steps	Test Data	Expected/ Intended Results	Actual Results	Pass/Fail
#Q01a	Add new event	Fill up the input fields with the event information.	All requirement information	Event will be added to database and Update will be reflected on the website.	As Expected.	Pass

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#Q01b	Add new image to gallery	Fill up the input fields caption and image.	Caption and Image	Image will be added to database and Update will be reflected on the website.	As Expected.	Pass
#Q01c	Remove an event	Select the event and from drop-down action select delete	Event id	Event Will be deleted from the database and update will be reflected on the website.	As Expected.	Pass
#Q01d	Remove an image from gallery	Select the image and from drop-down action select delete	Image id	Image Will be deleted from the database and update will be reflected on the website.	As Expected.	Pass
#Q01e	Edit event information	Select the event and from drop-down action select edit	All requirement information	Information Will be edited in the database and update will be reflected on the website.	As Expected.	Pass

Table 6.1: Software Testing

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Chapter 7

Project as Engineering Problem Analysis

Engineering problem analysis is the internal guideline of a project. It can be described as sustainability, social and environmental impact and analysis, dividing ethics and moral issues into its basic elements and finding the necessary features of their relationship with each other and with external elements.

7.1 Sustainability of the Project

Product durability refers to its ability to maintain and update. In the modern world, every published application needs to be maintained and constantly updated for its user base.
A product can be sustainable in three main categories:

- **Community viability:** Once developed and officially launched, the "OIR website" should have a strong user base

- **Financial Viability:** This is how the running costs of the system will be sustained after release. The system will be free for everyone. Shows all past and upcoming events that will take place. Most of the maintenance costs of the "OIR website" will consist of domain hosting and database storage costs.

- **Organizational Sustainability:** when the website is released or published, the way the organization continues to operate is essentially related to the sustainability of the organization. Basically there is a team that maintains the website when it is published under the organization. Here the organization can add new features, update project information, and create or expand new members to maintain the website.

"OIR Website" has many other planned features to work on and release. As the website has even more plans, the project will be maintained and updated after its release and premium services will be released for it. In conclusion, it can be said that the project is organizationally sustainable

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7.2 Social and Environmental Effects and Analysis

Social Effect: Today, security is a top priority for all service providers looking to rebuild after all restrictions are lifted. As we know, the COVID19 situation is likely to persist for a long time and investing in solutions can help manage and organize organizations and their services while maintaining a higher level of security. Environmental Effects: Environmental factors examined include variability in hours of service, probabilities of no-shows, and walk-in customers. The impact of these factors is evaluated against a near-optimal rule that already fits.

7.3 Addressing Ethics and Ethical Issues

In this age of technology it has become very easy to try to be someone, someone can unknowingly try to disguise you and use your identity card to commit illegal or any crime. It has become vital to keep user data safe otherwise someone can easily attack the system and take away user information.

- **Fraud and Identity Theft:** The website does not allow any other third-party software in the database. Data that the user provides no other information is stored.
- **Data Security:** Only the owner,admin(s) will have access to the server and database system. Database protected with username and password, no one else can access data collection except this logging information.
- **No Discrimination:** There is no discrimination based on race, sex, gender, religious belief, caste, language, political or other opinions, national or social origin, property, birth, or another status.

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Chapter 8

Lesson Learned

The internship was completely a new experience for me. I faced some challenges and problems during my internship period and I have to find out solutions for those problems. I have learned so many things from my internship. This experience is completely new learning for me and I have enjoyed it.

8.1 Problems Faced During this Period

During my internship program, I have faced lots of challenges while working on this Project. Some of these are listed below:

- **Adapting to New Technologies:** •Since it was the first time, I have ever worked on a website in an office environment where I had to learn and adapt to the company's new technology. Although it was possible to acquire skill sets, they were difficult to apply in real-life situations.

- **Keeping up to Speed:** Learning new technologies and using them was initially a slow process for me since it was the first time I used them in an office environment. So, the weekly deadline was quite difficult to meet and it slowed down the overall pace of development of the application.

- **Identifying and Fixing Bugs:** There were often bugs that were very hard to find, and even after they were found, fixing them became a big problem. Some bugs were so hard to fix that it took a full week to fix them.

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8.2 Solution of those Problems

Solution for those problems are listed below:

- **Adapting to New Technologies:**Adopting new technology was a difficult situation for me in the beginning. But after a few days, I got used to the whole process with the help of my supervisor and the web developer team.

- **Keeping up to Speed:** Initially, it was a slow process for me because it was the first time and I have never used it in an office environment. After a few days, it became easier to maintain work pressure and speed.

- **Identifying and Fixing Bugs:**We have a project board linked to a file share in Google Drive where we keep updating a list of bugs/features, we're working on.This makes it easier for me and the web developer team to understand the code-base status and fix bugs.

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Chapter 9

Future Work & Conclusion

The future of work describes changes in how work will get done over the next decade, influenced by technological, generational and social shifts.

9.1 Future Works

The OIR website is still under development. Some features still need to be refined before they can be developed. "OIR Website" is the first version of the system. It contains many improvement pages. Some of them are:

- More Information will be updated
- Add internship knowledge information
- Add query system for new website visitors
- Improve the existing system

9.2 Conclusion

The internship has been a very rewarding experience for me. I was able to work in an industry about which I had no prior knowledge. The process of transformation of theoretical knowledge, rich in practical knowledge, came upon me and led me in search of excellence in the craft of data science. Interns usually do not work on live projects and do not contribute to the workflow of ongoing projects in the office. But the people at the Office of Industrial Relations(OIR) felt like me. I have also learned to collaborate with other industries and as a result have improved my interpersonal skills such as communication, teamwork, edibility, work calmly under pressure and how to maintain a good relationship with my colleagues. I am very grateful for an experience like this. I feel that working and applying my skills in real development is rewarding and satisfying. Finally, I would like to thank both of my supervisors, whose guidance and encouragement have convinced me to strive for success in this project and for the endless project that will come my way in the future.

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Bibliography

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An Undergraduate Internship/Project on Website For The Office Of Industry Academia Relations SETS,IUB

By

Adiba Sinthia Prome

Student ID: **1720157**

Summer, 2022

Consent Form

The student modified the internship final report as per the recommendations made by his/her academic supervisor and/or panel members during final viva, and the department can use this version for archiving.

Asif 14/9/22

(Signature of the Supervisor)

Md. Asif Bin Khaled

Department of Computer Science & Engineering

Independent University, Bangladesh

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