SCHOLARSHIP PORTAL MANAGEMENT SYSTEM

A Software Project Submitted
By

Name	ID
Mondal, Bizary Prava	17-33947-1
Rafa, Humayara Chowdhury	17-35413-3
Ishrak,Md.Nafis	17-35500-3
Ismail, Isrita	17-35675-3

Under the supervision of

Abhijit Bhowmik
Associate Professor and Special Assistant
Office of Student Affairs
Department of Computer Science
Faculty of Science and Technology
American International University Bangladesh

Spring Semester 2019-2020

Disclaimer

This is to certify that this project is our original work. No part of this has been submitted elsewhere partially or fully for the award of any other degree. Any material reproduced in this project has been properly acknowledged.

1. Name: Mondal, Bizary Prava
ID: 17-33947-1

2. Name: Rafa, Humayara Chowdhury
ID : 17-35413-3

3. Name: Ishrak, Md.Nafis
ID : 17-35500-3

4. Name: Ismail, Isrita

ID : 17-35675-3

Approval

The Software Project or Project titled "Intelligent Tourist Guide System" has been submitted to the following respected members of the Board of Examiners of the Faculty of Science and Information Technology in partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering on 23th September 2018 by the following students and has been accepted satisfactory.

Abhijit Bhowmik
Faculty & Supervisor
Department of Computer Science
American International University- Bangladesh

Dr. M M Mahbubul Syeed
Head(Undergraduate)
Department of Computer Science
American International University- Bangladesh

Professor Dr. Tafazzal Hossain
Dean in Charge
Faculty of Science & Technology
American International University-Bangladesh

Dr. Carmen Z. Lamagna
Vice Chancellor
American International University-Bangladesh

Acknowledgements

We would like to take the chance to express our gratitude to our honorable teacher & Supervisor Abhijit Bhowmik, for his continuous guidance and support regarding this report. Besides this, we have found so many sincere and productive advices from many people that we would like pay homage to them. We convey our gratitude to our honorable Vice Chancellor, Dr. Carmen Z. Lamagna for encouragement.

Table of Contents

Chapter 1: Statement of Work

1.1. Purpose/Objectives

The principle purpose of our **Scholarship Portal Management System** is to help students to find their desired scholarship offers and the facilities provided by universities and organizations can reach to every student out there[3]. The main objective of feasibility study is to test the technical, social and economic feasibility of developing a system.

- **Technical Feasibility:** It is based on the technical resources available and whether those resources are capable of converting proposed ideas into a working system. Technologies will be used: MySQL, JavaScript, PHP, APACHE.
- **Economic feasibility:** The developing system must be justified by cost and benefit criteria to ensure that effort is concentrated on the project that will give best return at the earliest. As the system is developed as a part of our study, there is no manual cost to be spent for the proposed system [5].
- **Operational feasibility:** One of the main problems faced during the development of a new system is getting acceptance from the user. Being general purpose application there will be no resistance from the user as this will be a reliable source of information.
- **Time feasibility:** It is done to evaluate the time in which the application can be done [3]. If manpower and equipment are adequate then it will take less time to complete.

1.2. Scope

The scope of the project is clear and specified as the scholarship offers, criteria and facilities providing by Universities and Organizations are accessible by students. Our system is divided into phases, those are:

- Development of a Day to Day Plan via web service or in person.
- Customization and improvement of existing system.
- Individual information module for each client.
- Client authentication will be maintained strictly by the admin.
- Client will be informed about the viewers of their posts.
- Viewers have search module to help them to find their desired scholarship opportunities.

Admin has the highest authority over the entire system. Admin responsibilities consists of update or modify existing system, ensure data security and user authentication, cost fixing and efficient tour planning for clients, assign necessary role and privileges system users and as well as to the

clients. Admin has the power to take away provided privileges that has been assigned to users or clients. The whole system will work as a bridge in between the Students and the Universities and Organizations [3].

1.3. Proposed System

This software or web application is intended for implementing a **Scholarship Portal Management System** so that a student can easily access to our service from anywhere, anytime. This system can make the communication in between organizations and students is much easier [6].

Benefits/Improvements of Proposed System:

- Client's satisfaction
- Reduce manpower cost
- Reduce the erroneous data entry
- Efficient and easy way of getting information
- Less paperwork
- Easy to manage website content
- Monitor system performance efficiently (Depends on various factors)
- Reduce system loading time
- Compliance with time.

1.4. System Features

Admin

- Update own profile
- Add/delete client.
- Update/add/delete client primary profile
- Approve/Disapprove post and comment
- Check Ratings and Reviews
- Count the view of post

Registered User (Client)

- Update own profile
- Write posts
- Edit/Update posts
- Reply on post
- Live chatting
- Count the view on post
- Contact Admin

Unregistered User (Viewer)

- View the website
- View/Search contents (posts, reviews, offers)
- Check availability of offers, deadlines and also their costs
- Like/Comment on posts
- Apply scholarship
- Live chatting
- Contact Admin

1.5 Environment

1.5.1 Organizations Involved

Project Client: ABCD
Developer: Scholarship Portal Management team
User: Online Users or Client

1.5.2 Processing

- This Web Application will have a graphical user interface which will be able to view by any browser
- That means it's a website or web application which is browser independent.
- Two working modules. Admin and Client
- This website will store the information of all client which can be viewed by user themselves and the administrator of this software.
- Authenticated & secure login system and secure data transmission for all user.

1.5.3 Security

System's security requirements:

- User authentication is required to access the application.
- A user must be a registered user to login to use the features.

.6. Assumptions

Some third-party software may be used to build up this project. These are free components, most of them are open source. We have used Opera, Mozilla Firefox, and Google Chrome etc. as a web browser to access user interface as client application. So, our project will not be affected because we are not using anything for which it becomes illegal to use [7].

Some open source libraries and software's are used to build up this project:

- PHP ZIP files Library to use file compression.
- PHP Session to verify user login,
- For dynamic interface some Ajax library is used.
- MOO tools, jQuery

.7. Constraints

- Usage outside regulation: Data passes from client to server through TCP/IP & we are not using any public key encryption service like SSL certificate. So, we have constraints in case of passing user data. It may cause – Confidentiality, Integrity problems [7]. Only registered users are valid & valid users can use the software through Client Application with help of Internet Browser on server side. For any missing password found by anonymous user, responsibility goes to valid user.

- Bandwidth limitations: It may lose server connection for technical error (Depends on Hardware/Internet connection). We need to run query again.

- Databases: Databases we are using MySQL Database. User queries more than server's limitations we need to check databases and refresh table data. In case of lack of DB caching.

- Parallel operations: Parallel use of other Internet application with this software may hamper in bandwidth, may occur taking time for a query for slow connections.

- Language requirements: Language is used in this software is PHP. Suppose any user wants Oracle Database we need to use bind variable technique.

- Communications protocols: Communication protocols we are using- TCP/IP to interact with the server. Other protocol is not considerable if user wants.

- Security considerations: If user doesn't want to buy SSL security then client applications will not be using any public key encryption service like SSL certificate (i.e. 128-bit RSA encryption). So, we have constraints in case of passing user data.

It may cause (In case of internet security) –

- **Authentication problem:** Server may not recognize/confirm actual valid user.
- **Confidentiality problem:** User, intended server fails "understanding" message contents.
- **Integrity problem:** sender, server may fail to ensure message not altered without detection
- **Eavesdrop**: There may be Intercept messaging, actively insert messages into connection
- **Impersonation:** can fake (spoof) source address in packet (or any field in packet)
- **Hijacking:** "take over" ongoing connection by removing sender or server, inserting himself in place
- **Denial of service:** prevent service from being used by others (e.g., by overloading resources)

1.8 Proposed System

1.8.1 Description/Improvements of Proposed System

- Client's satisfaction
- Reduce manpower cost
- Reduce the erroneous data entry
- Efficient and easy way of getting information
- Less paperwork
- Easy to manage website content
- Monitor system performance efficiently (Depends on various factors)
- Reduce system loading time
- Compliance with time.

1.8.2 Resources

All the resource needed is provided below.

1.8.3 Hardware

➢ *Minimum requirements for server:*
- Processor: Xeon based microprocessor.
- RAM: 16 GB.
- System Type: Linux (64 bit).
- Storage: 256 GB SSD.
- For Storage Service: Network File System (NFS)

➢ *Minimum requirements for client:*
- Processor: Dual-core.
- RAM: 2 GB.
- System: Windows, MAC OS X, Linux.
- Web Browser: Mozilla Firefox, Google Chrome, Internet Explorer

1.8.4 Software

- Notepad++ / Brackets/ Atom
- PHP, MySQL, CSS, JavaScript, Bootstrap
- Apache

1.8.5 Operating Environment

The system will be operated from the external (your preferred data center) Linux Server in which site will be hosted. Hosting server has 99% Uptime. This website is platform independent. User application is accessible through various kinds of browsers like Mozilla Firefox, and Google Chrome etc. This website is a web application where universities have user interfaces through browser and main part is hosted on Apache Server. IBM or MAC any platform user can use. Operating System can be used Windows of any version from Windows 98, Windows XP/Vista to Windows 10, MAC OS X 10.5 or above.

1.9 Project Time and Cost

1.9.1 Project Period

Expected Time of completion of project is 3 months.

1.9.2 Project Schedule

Term	Description
BA	Business Analyst
PM	Project Manager
D	Developer
QT	Quality Tester

	A	B	C	D	E	F	G
1					**Project Schedule**		
2					Project Start Date		10-03-2020
3					Project End Date		27-01-2021
4	WBS	Task	Lead	Start	End	Work Days	%Complete
5	**1**	**Project Analysis**	PM/BA	10-03-2020	01-05-2020		
6	1.1	Define User Requirements		10-03-2020	31-03-2020	21	100%
7	1.2	Analyze website Requirements		01-04-2020	11-04-2020	10	100%
8	1.3	Cost and Functionality Analysis		12-04-2020	01-05-2020	19	100%
9	**2**	**Design**	PM/D	01-05-2020	01-07-2020		
10	2.1	Define standards for project		01-05-2020	09-05-2020	8	100%
11	2.2	Design website structure		10-05-2020	20-05-2020	10	100%
12	2.3	User Interface		21-05-2020	05-06-2020	15	100%
13	2.4	Security features		06-06-2020	14-06-2020	8	0%
14	2.5	Prototyping		15-06-2020	01-07-2020	16	100%
15	**3**	**System Development**	D/QT	02-07-2020	06-10-2020		
16	3.1	Web pages		02-07-2020	21-07-2020	18	50%
17	3.2	Database		22-07-2020	10-09-2020	50	0%
18	3.3	Unit/Component test		11-09-2020	06-10-2020	26	0%
19	**4**	**System Integration**	D/QT	07-09-2020	02-11-2020		
20	4.1	Link pages and images		07-09-2020	16-10-2020	9	50%
21	4.2	Link Database		17-10-2020	02-11-2020	16	0%
22	**5**	**Overall System Test**	QT	03-11-2020	11-01-2021		
23	5.1	Page Links		03-11-2020	23-11-2020	20	0%
24	5.2	User Interface		24-11-2020	04-12-2020	10	0%
25	5.3	Database access		05-12-2020	23-12-2020	18	0%
26	5.4	Exception handeling		24-12-2020	11-01-2021	18	0%
27	**6**	**Trial Trading**	PM	12-01-2021	27-01-2021		
28	6.1	Connection to the internet		12-01-2021	27-01-2021	15	0%

1.9.3 Domain and Hosting Package

Domain [12]

- **.com** 950tk/year
- **.net** 950tk/year
- **.info** 950tk/ year
- **.biz** 950tk/ year
- **.xyz** 120tk/year

Hosting Package A: Small websites

- Web Space: 2 GB SSD Storage

- Bandwidth: 100 GB /Monthly
- RAID 10 SSD Server
- LiteSpeed Web Server
- Two Addon Domain
- Unlimited Sub Domains
- Unlimited Email Accounts
- Unlimited Databases
- Tk.1500/ year

Hosting Package B: Medium sized websites

- Web Space: 4 GB SSD Storage
- Bandwidth: 200 GB /Monthly
- RAID 10 SSD Server
- LiteSpeed Web Server
- Four Addon Domains
- Unlimited Sub Domains
- Unlimited Email Accounts
- Unlimited Databases
- Tk.2500/ year

Hosting Package C: Demanding sites

- Web Space: 5GB SSD Storage
- Bandwidth: 250 GB /Monthly
- RAID 10 SSD Server
- LiteSpeed Web Server

- Five Addon Domains
- Unlimited Sub Domains
- Unlimited Email Accounts
- Unlimited Databases
- Tk.3000/ year

Hosting Package D: Highly demanding sites

- Web Space: 20GB SSD Storage
- Bandwidth: 800 GB /Monthly
- RAID 10 SSD Server
- LiteSpeed Web Server
- Twenty Addon Domains
- Unlimited Sub Domains
- Unlimited Email Accounts
- Unlimited Databases
- Tk.7000/ year

Estimated service cost

Description	Cost Assumption
Site launch (hosting)	15,000 BDT
Maintenance (1 year)	45,000 BDT
Developers	1,15,000 BDT
Grand total	**1,75,000 BDT**

1.10 Risk assessment

	Risk	Probability	Impact
4	Inexperienced staff	70%	C
5	Insufficient knowledge of database	50%	B
6	Excessive user	30%	A
7	Delay delivery	10%	D
8	Change Requirements	80%	C
9			
10	Average	36%	
11			
12	Risk Probability	36%(Likely)	
13			
14			
15			
16			
17	Impact Value		
18	A -> **Catastrophic**		
19	B -> **Critical**		
20	C -> **Marginal**		
21	D -> **Negligible**		

The impact of each risk driver on the risk component is divided into one of four impact categories—negligible, marginal, critical, or catastrophic.

	Catastrophic	**Critical**	**Marginal**	**Negligible**
Inexperienced staff			Having no idea about the interface and website	
Insufficient knowledge of database		Not understanding the specifics management system		
Excessive user	Crashing or blocking the website			
Delay delivery				Fail to meet deadline
Change		Customer will		

Requirements		change requirements		

1.11 Assessing overall project risk

1. Have software engineer team formally committed to support the project?
Answer: Yes. All the members are formally committed to support the project. They also ensure that they will give all types of available facilities.

2. Are requirements fully understood by the software engineering team and their customers?
Answer: Yes. As the software engineering team or the developers has the sound knowledge about the requirements so it is easily understandable by the team. The requirements details are well organized also informative, so it is under stable by the customers.

3. Are end-users enthusiastically committed to the project and the system/product to be built?
Answer: Yes. Because the end-users are expecting that, they will be able to find all kind of information about Scholarship Portal Management System.

4. Have user been involved fully in the definition of requirements?
Answer: Yes. The user has been fully involved in the definition of requirements. They are aware of the application requirements.

5. Is project scope stable?
Answer: Yes. Project scope is stable because the minimum and mandatory scope is almost covered by the software engineering team. If any further scope will arise then just adding it with the old ones.

6. Does the software engineering team have the right mix of skills?
Answer: Yes. The software engineering team has the right mix of skills. The team members have the capability of doing their work in a team, ability to work in pressure and also have sound knowledge according to the software implementation.

7. Are project requirements stable?
Answer: Yes. Currently all possible requirements are being listed, and seem that if anything would be added later to the list will not make the project unstable. All requirements for this project are easily available that will enthusiast the end-user to use it.

8. Does the project team have experience with the technology to be implemented?
Answer: Yes. The project team has experience with the technology to be implemented because they have the sound knowledge about the technologies and the technologies are also implemented by them before.

9. Does the project team and client are aware about the possible risks?
Answer: Yes. Project team prepare the possible risk assessment and aware of handling the risk. Client is also being notified.

Chapter 2: Software Requirement Specification

2.1 Objectives and Scope

The scope of the project is to simplify the student scholarship process. The clients as Universities, Organizations or Governments can post their scholarship offers in the system. Viewers can search and view the posted offers of educational scholarships from the web application.

The **Scholarship Portal Management System** is supposed to have the following features:

- Development of a Day to Day Plan via web service or in person.
- Customization and improvement of existing system.
- Individual information module for each client.
- Client authentication will be maintained strictly by the admin.
- Client will be informed about the viewers of their posts.
- Viewers have search module to help them to find their desired scholarship opportunities.

The features that are described in this document are used in the future phases of the software development cycle. The features described here meet the needs of all the users.

2.2 Overview of the Present System

Currently there are very few systems for Scholarship Portal for students. There is a Web application named **Scholarship Portal** which is a little bit similar with our system. But it is not implemented or available for Bangladesh.
Although, our system has some advanced features for Bangladeshi students like live chat, person to person contact, offered scholarships review and rating, checking offer details and criteria, viewers response through comments etc.

2.3 Data Flow Diagram of the Present System

Not required.

2.4 Weakness of the Present System

- Most of the routes are not effective
- Most of the systems required to register
- Less information and availability without registration
- Not connected with the university directly
- Universities and students don't meet at a point

2.5 Overview of the Proposed System

Proposed system will have the customize plans based on helping the students without any hassles where universities will be connected with the system directly as clients. The system will be a platform where students and universities can meet on the issue of scholarship. The online applying facilities will make this system a complete package.

2.6 Benefits of Proposed System

Benefits /Improvements of Proposed System

- No hassle for searching the available scholarship
- Students don't need to register the system
- The website is totally free to visit
- Students will get multiple scholarship offers in one website
- Clients/Universities will be connected with system admin directly
- Clients will post their scholarship announcement on the website directly
- Best scholarships & offers to apply
- Category and key search options specify more on students need
- Viewers/Anyone can contact the system admin
- Minimizes searching time

- Live chatting option
- Students can visit the university website from the system
- Recommends what's new and most popular
- All the posts will be authenticated and verified by the system admin
- Choices from the best universities
- Fast & safe surfing
- Client satisfaction on proper marketing
- Will get feedback from all kind of users
- Compliance with time

2.7 System Features

Admin

- Update own profile
- Add/delete client.
- Update/add/delete client primary profile
- Approve/Disapprove post and comment
- Check Ratings and Reviews
- Count the view of post

Registered User (Client)

- Update own profile
- Write posts
- Edit/Update posts
- Reply on post
- Live chatting
- Count the view on post
- Contact Admin

Unregistered User (Viewer)

- View the website
- View/Search contents (posts, reviews, offers)
- Check availability of offers, deadlines and also their costs
- Like/Comment on posts
- Apply scholarship
- Live chatting
- Contact Admin

2.8 Hardware and Software Requirements

2.8.1 Hardware

Minimum requirements for server:

- Processor: Xeon based microprocessor.
- RAM: 16 GB.
- System Type: Windows (64 bit).
- Storage: 256 GB SSD.
- For Storage Service: Network File System (NFS)

Minimum requirements for client:

- Processor: Dual-core.
- RAM: 2 GB.
- System: Windows, MAC OS X, Linux.
- Web Browser: Firefox, Google Chrome

2.8.2 Software

- Notepad++
- MySQL.
- XAMPP Control Panel v3.2.4

2.9 Constraints and Limitations

Assumptions and Dependencies

- The users have sufficient knowledge of computers.
- The user's computer should have Internet connection and Internet server capabilities.
- The users know the English language, as the user interface will be provided in English.

Constraints

- Bandwidth limitations: It may lose server connection for technical error (Depends on Hardware/Internet connection). We need to run query again.

- Databases: Databases we are using My Sql Database. User queries more than server's limitations we need to check databases and refresh table data.

- Parallel operations: Parallel use of other Internet application with this software may hamper in bandwidth, may occur taking time for a query for slow connections.

- Language requirements: If any user wants to use any language other than what we used for My Sql Database; we need to use bind variable technique.

2.10 Budget

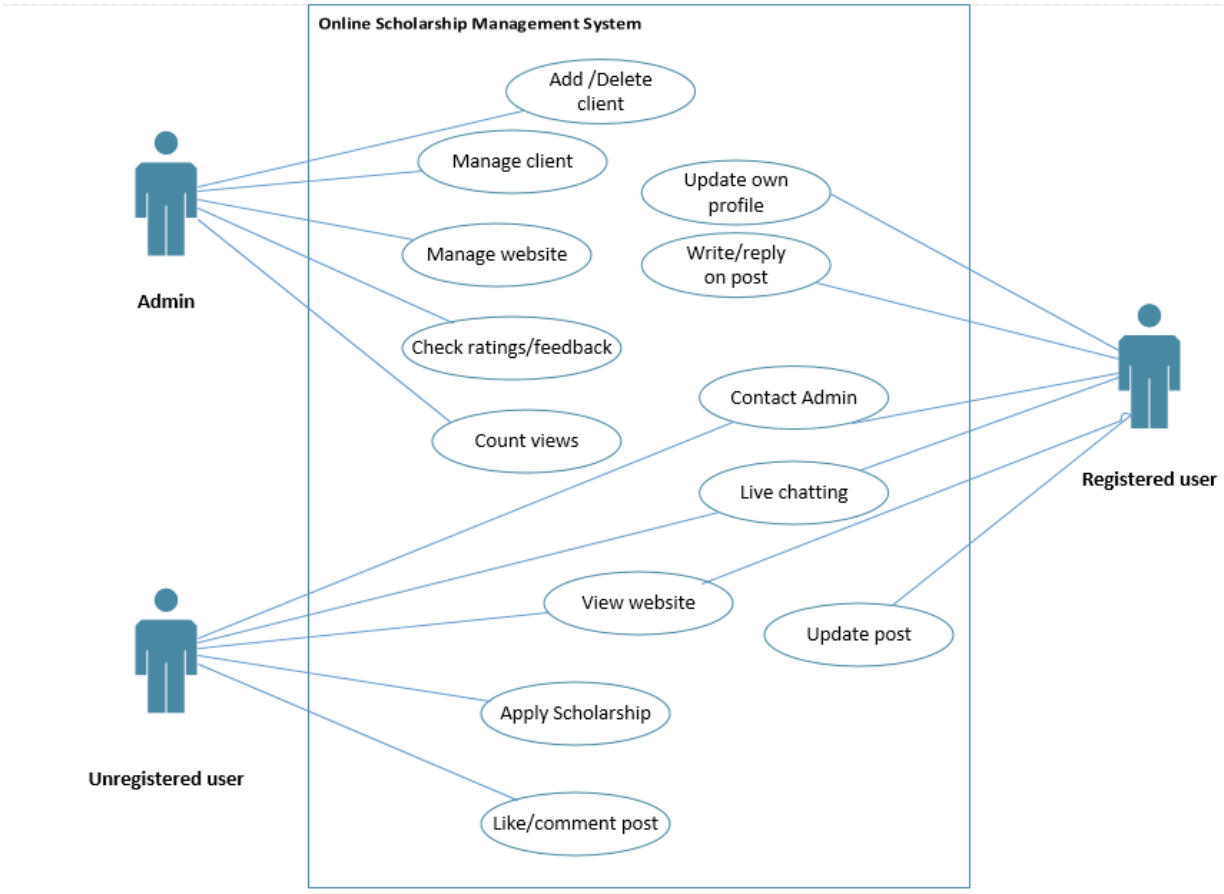
Description	Cost Assumption
Site launch (hosting)	15,000 BDT
Maintenance (1 year)	45,000 BDT
Developers	1,15,000 BDT
Grand total	**1,75,000 BDT**

2.11 Conclusion

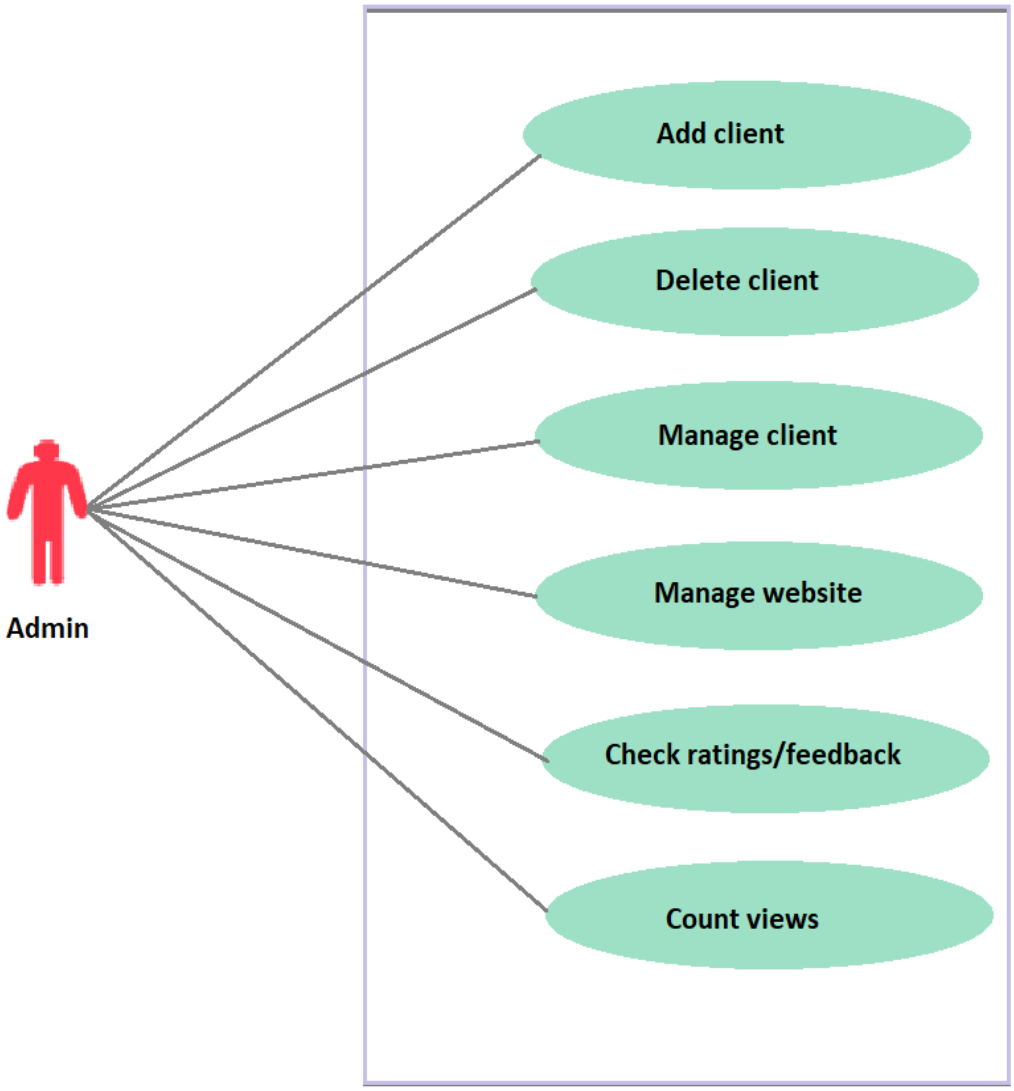
This Requirement Specification Document has been developed based upon by the studying common scenario and previous experience of the project manager. Thus, any unusual circumstances rise on the process of development may derail the values and time frame mention in this document.

Chapter 3: Diagram

3.1 Use Case Diagram


Online Scholarship Management System
Add /Delete client
Manage client
Manage website
Check ratings/feedback
Count views
Update own profile
Write/reply on post
Contact Admin
Live chatting
View website
Update post
Apply Scholarship
Like/comment post
Admin
Registered user
Unregistered user

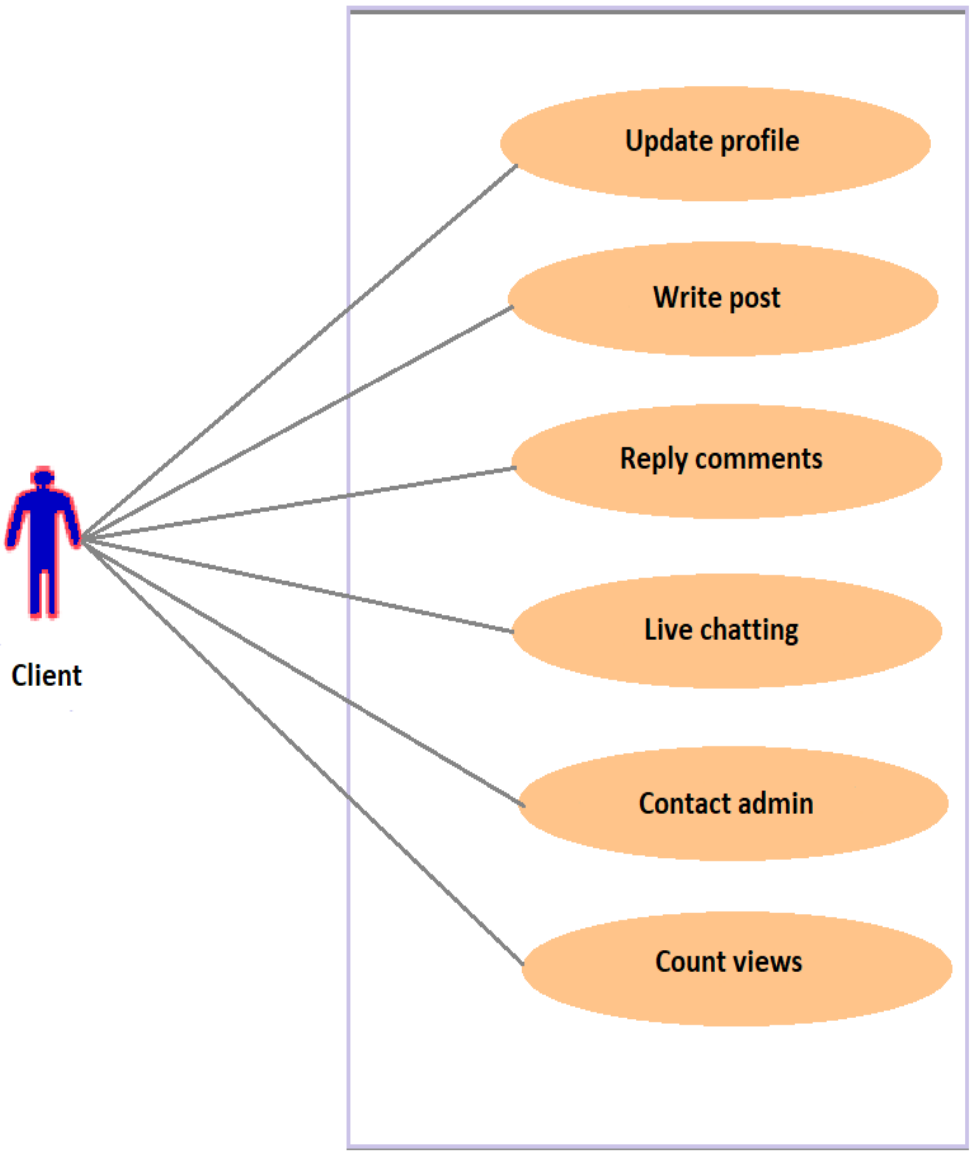
3.1.1. Admin Functionality:



The functionality of an admin is as follows:

- Adding a new client
- Delete an existing client
- Can manage clients
- Manage the website pages
- Check the ratings and feedback
- Can count the view
- Can control all the settings

3.1.2. Client Functionality:

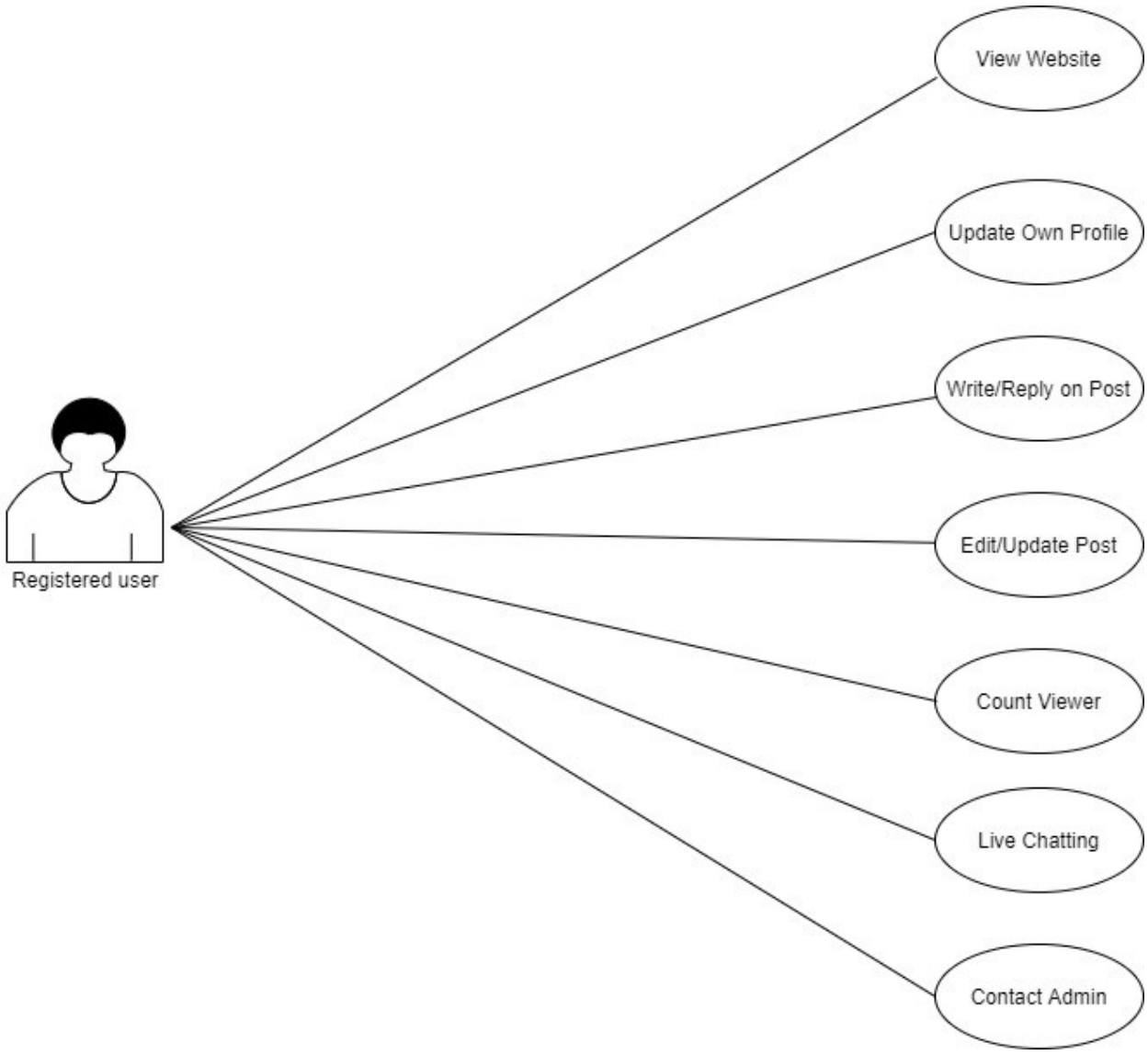


The functionality of a client is as follows:

- Can update own profile
- Can write post
- Can manage own post
- Can reply the comments
- Join the live chat with the students
- Can contact the admin

- Can count the view

3.1.3 Registered User:

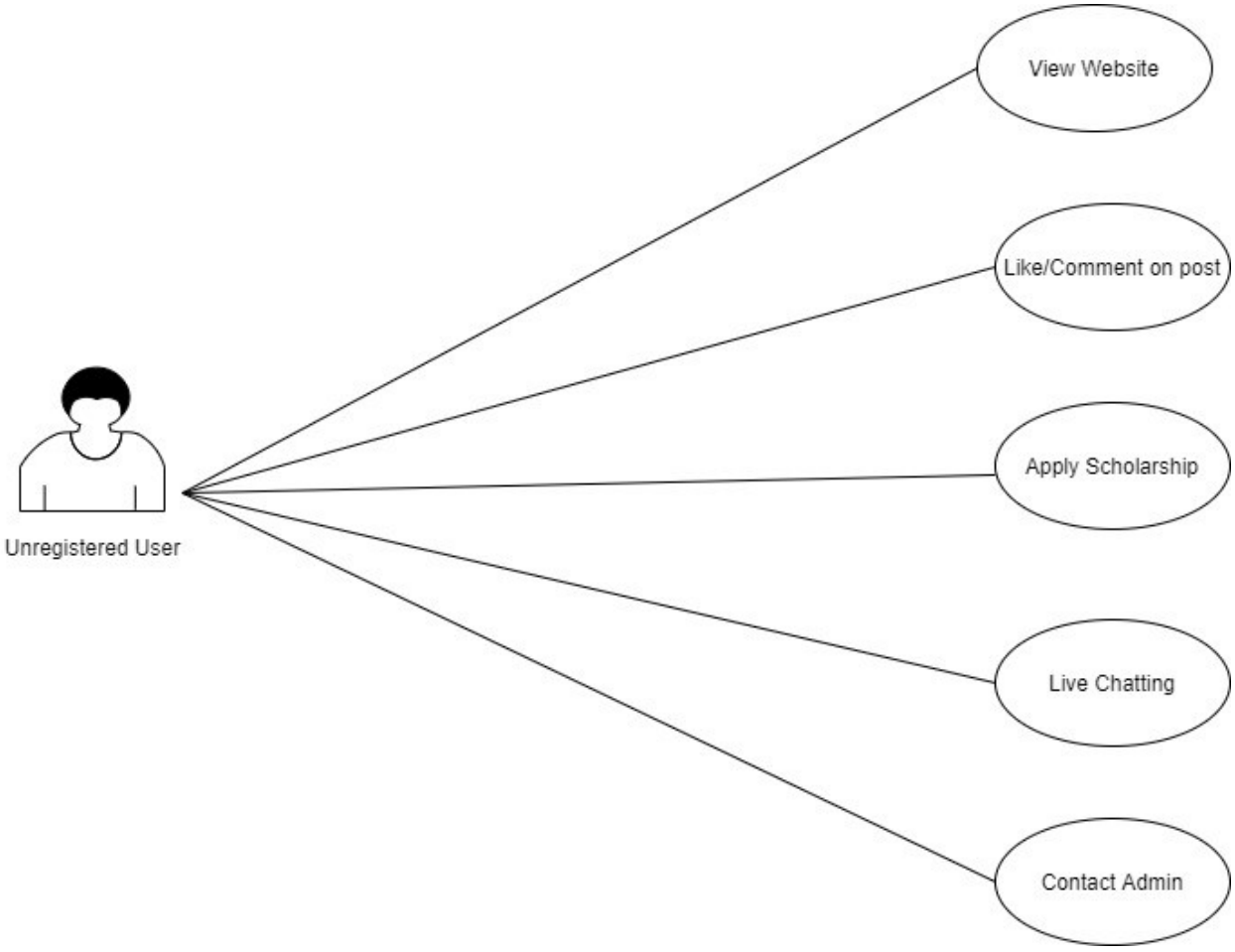


The function of Registered user:

- Can visit website
- See/search contents (posts, reviews, offers)
- Check availability of offers, deadlines and also their costs
- Like/Comment the posts
- Apply from the post
- Contact Admin

- Give reviews

3.1.4 Unregistered User:

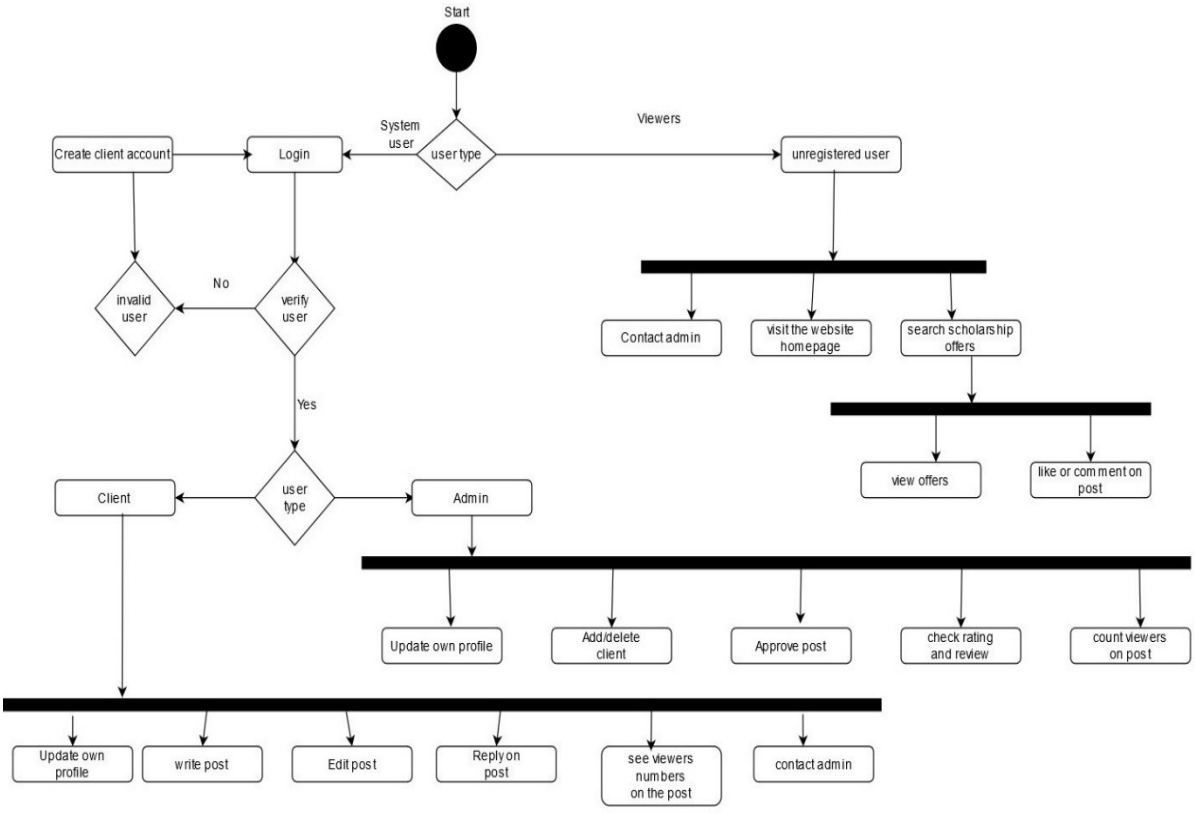


The function of Unregistered user:

- Can visit the website
- See/search contents (posts, reviews, offers)
- Check availability of offers, deadlines and also their costs
- Like/Comment on posts

3.2 Activity Diagram

This diagram here shows different type of user activities which includes user login, registration and administrative tasks. Depending on user types user will perform several activities such as update profile, write posts, add clients, approve posts etc. There are basically two types of registered user which are client and admin. Unregistered users will be able to visit the website, see and interact with scholarship offers and also contact admin.



3.3 Prototype

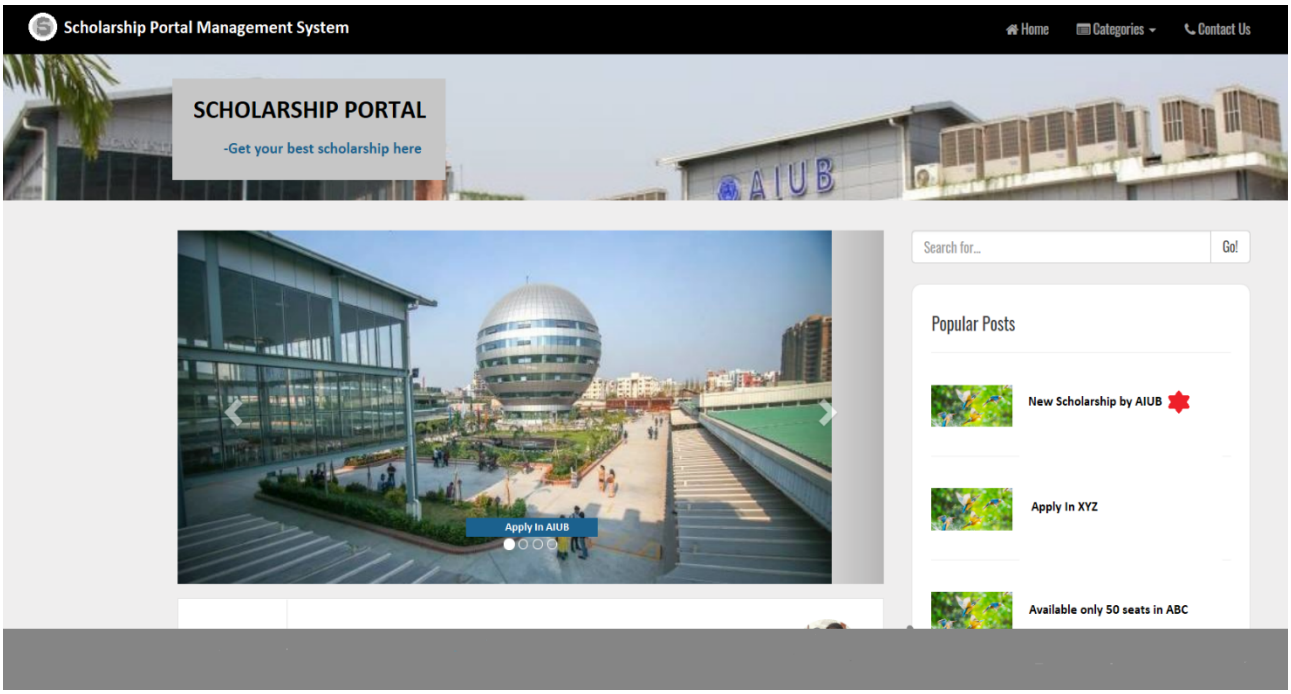


Fig-1: Home page

This home page is showing the basic outlook of the scholarship portal management system. In the top right corner there are three buttons as home, categories and contact us. There is a slide bar in front, which will show the images of the universities offering their scholarship to get attraction from the students. In the right side of the page, the headlines of the popular posts/ latest scholarships will be popping up. By this, the viewers will know about the offers easily at a glance. By clicking them, viewers will be able to see the whole scholarship offer in the home page.

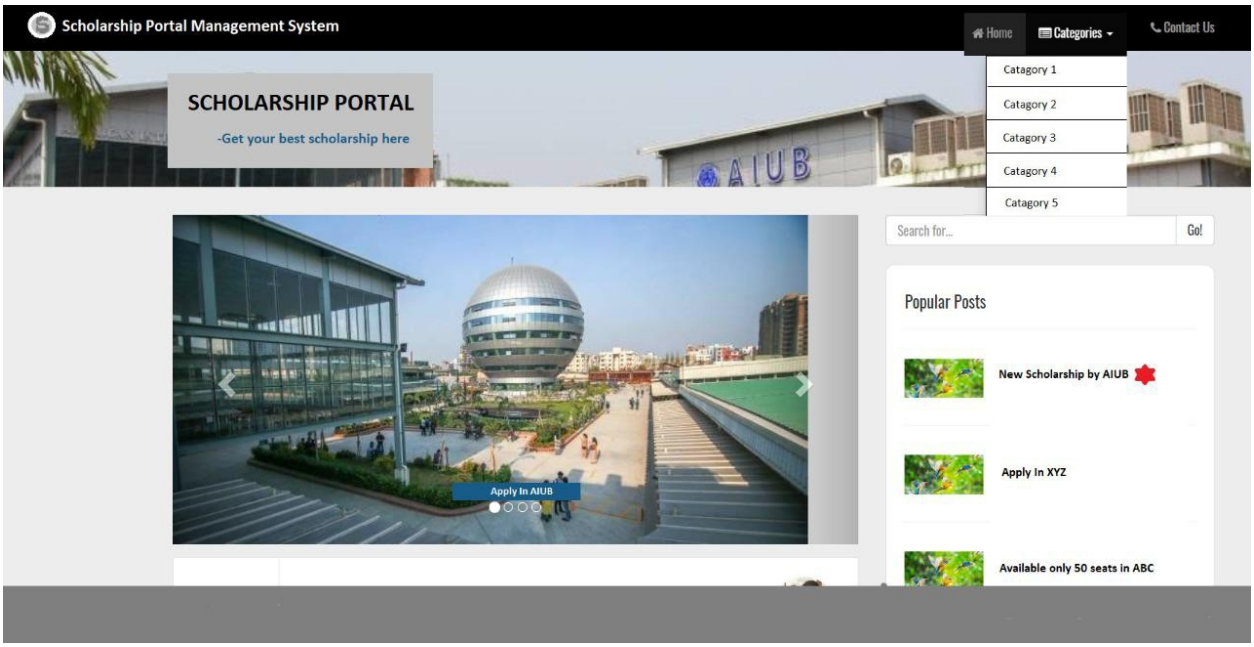


Fig-2: View category

There is a button as categories in the top right corner of the home page. By clicking this, users can see the different categories of scholarships. (Categories can be sorted by universities, by countries, or by departments). This feature will help the users to get them only the scholarship offers of their choice/ preferred category.
There is also a search box below the categories button, which will give the facility of key searching. By this, users can have more specific result on their search.

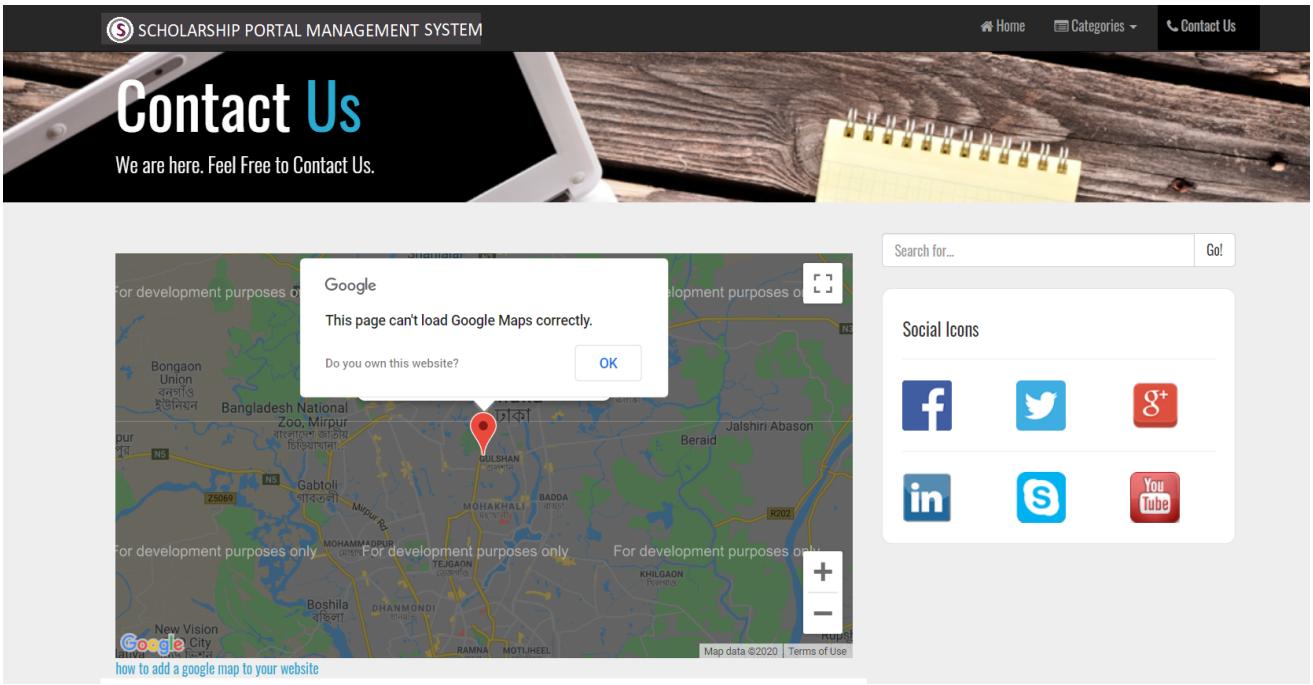


Fig-3: Contact Us page

The Contact Us page will help the viewers to contact with the admins/ page managements. Viewers will also get all the social sites that is linked with the page. By this feature, viewers can query the admin directly, complain any problems and give their reviews or feedback.

Chapter-4: Software Project Management Plan

4.1 Document History and Distribution

The **Scholarship Portal Management System** is a searching system where user can get all kind of information about scholarship offers. Users can access all sort of information about requirements and process to apply for scholarship. Users can benefit from this service by saving valuable time [9].

4.1.1 Revision History

Revision	Revision Date	Description of Change	Author
01	January 21th 2021	Primary Phage	Isrita Ismail
02	January 24th 2021	Yes	Humayara Rafa

These versions will show up there and also on its service work good.

4.1.2 Distribution

Recipient Name	Recipient Organization	Distribution Method
Abhijit Bhowmik	AIUB	Hard Copy, Soft Copy
Abhijit Bhowmik	AIUB	Hard Copy, Soft Copy

Soft copy and Hard copy Distributed copy mention on the table.

4.2 Overview

4.2.1 Purpose, Objectives and Project Scope

The main objective of this document is to illustrate the requirements of the scholarship portal management system project. The document gives the detailed description of the both functional and non-functional requirements for this system [7] [11]. The document is developed after a number of studying the requirement specifications paper of the given Project. The final product of the team will be meeting the requirements of this document.

4.2.2 Project Scope

- To development **Scholarship Portal Management System** where Users will feel easy to get information.
- This system makes the administrative work easy.
- Multiple opportunities in one system like searching for scholarship offers and apply.

4.2.3 Assumptions and Constraints

The assumptions during the projects are-

- The development team has not quite enough experience as a whole to complete the project.

- Additional resources (people or money) are not available for the project.

4.3 Project Deliverables

4.3.1 The list of project deliverables is [9]:

1. Statement of Work (SOW)
2. Software Requirements Specification (SRS)
3. Software Project Management plan (SPMP)
4. Software Design Plan (SDP)

4.3.2 Schedule and Budget Summary

SCHEDULE	
MILESTONE OR MAJOR PROJECT DELIVERABLE	PLANNED COMPLETION DATE(DAY)
SOW	September 16th 2020
SRS	September 30th 2020
SPMP	October 7th 2020
SDP	October 21th 2020
Soft testing plan	October 28th 2020
Presentation & project progress	November 4th 2020
Technical documentation	With completed product
Software evaluation report	Along with final submission

4.4 Evolution of the Software Project Management Plan

The preliminary drafts of the SPMP will be submitted to the project manager and after approval; copies of the same will be distributed to the members of the group on the date as referred to in section 1.1.4.

4.4.1 Definitions

Terms	Description
SOW	Statement of Work
SRS	Software Requirement Specification
SPMP	Software Project Management Plan
SDP	Software Design Plan
SQATP	Software Quality Assurance and Testing Plan
Impact	1-catastrophic 2-critical 3-marginal 4-negligible

4.5 Project Organization

Project organization depends on three major Structures

4.5.1 External Interfaces

The system users' relationship will be responsible for formal interaction between the developer's team and the customer contact. Necessary interaction will be done through anyone on the team, but all discussions with the user will be documented clearly for record. All user requests for services or configuration item changes will be in writing and approved by the project's Configuration Control Board (CCB) [9], which consists of all team members.

4.5.2 Internal Structure

There are four developers for this project. All members have specified areas of responsibility and everybody contributes equally to the project. Because there are only four members on the team, each member holds more than one role.

The team members will change roles throughout the life of the project, and each member will continue to have more than one role.

4.5.3 Roles and Responsibilities

The software developers are responsible for all documentation to be developed and for all work to be done.

4.6 Managerial Process Plans

4.6.1 Project Start-up Plan

This section describes the materials and resources required to start the project. Because most of this information was predefined for the team, this section will not describe the rationale for many of these choices.

4.6.2 Estimation Plan

As previously stated in that, the total development time is estimated to be 94 days and the total internal cost to be 175000 BDT. These figures were obtained by expert judgment by analogy, that is, by comparison with similar projects.

4.6.3 Staffing Plan

Each team member will be available for 8 hours per day as the project purpose. This time includes the team and supervisor meetings, document preparation and inspection, and tool development.

4.6.4 Resource Acquisition Plan

- All resources for the project will be available at the start of the project and will not change substantially over time. Below are the planned changes: The technical writer will change after completing a documentation
- The team member's roles will change according to project needs

4.6.5 Project Staff Training Plan

No additional staff training needed for this project**.**

4.7 Work Plan

Work Activities and Schedule Allocation

4.7.1 Budget Allocation

Budget Allocation		
	HOURS	**COSTS**
Agency Labor		
Contract Labor	N/A	0 BDT
Non-Labor Costs	N/A	0 BDT
TOTAL HOURS / IMPLEMENTATION COST		

4.8 Control Plan

4.8.1 Requirements Control Plan

When changes are to be made in the requirements after the Software Requirement Specification has been released, the changes shall be brought to the attention of the developers and discussed. Any changes that are to be made will be with the prior approval of the supervisor and only if feasible and permissible within the constraints of the project and resources in terms of knowledge and skill of the developers required. Once the changes have been made to the Software Requirement Specification document, an updated version of the Software Requirement Specification will be released.

4.8.2 Schedule Control Plan

If the work scheduled in section 1.1.4 is gets behind, the developer will be ready to spend extra time on the project in between and after the schedules to make up for the lost time and deliver the final project on time.

4.8.3 Budget Control Plan

Average monthly income will be determined by totaling all earnings for the year and dividing by 12. Average monthly spending will be generated by tracking all expenditures. "The difference between "Budget" and "Current Spending" will be the savings. If expenditure exceeds the income than steps may be follow to cut back on expenditures, depending on the specific savings goals. Expenses are monitored by the project manager, and reported and accessed via the Weekly Status Report.

4.8.4 Quality Control Plan

Any major changes that affect the milestones or the budget will have to be approved by all and documented. All will be responsible for ensuring that the project will be completed on time and within budget. This will be accomplished through daily meetings of the team members with the supervisor. At each meeting, developer team will present the day’s progress and problems. Al will determine whether they are progressing as expected and whether they are following the

specification document and the project management plan. Any major problems faced by the team members will immediately be reported to all.

4.8.5 Reporting Plan

The updated Software Project Management Plan will be circulated as mentioned in schedule of section 1.1.4. Each of preliminary versions of all the documents and updates and status reports will be sent and discussed with the advisor and upon approval the approved document will be circulated to the other members of the team. The report on the status of the project will be sent to the members of the team.

4.8.6 Metrics Collection Plan

As the system based on object oriented so the metrics focus on measurement that can be applied to the class and the design characteristics—localization, encapsulation, information hiding, inheritance, and object abstraction techniques—that make the class unique.

4.9 Risk Management

Risks	Probability	Impact	Rating	RMMM
Project Manager Availability	50%	3	Medium	R-1
Schedule slips	70%	1	High	R-2
System goes hour	60%	3	Medium	R-3
Project canceled	30%	4	Low	R-4
False feature rich	40%	2	Low	R-5
Programmers doesn't have good experience	50%	3	Medium	R-6
Late delivery	50%	3	Medium	R-7
Customer Participation in Beta Testing	30%	4	Low	R-8

4.10 Closeout Plan

At the end of the project, the following actions will occur:

- The developer team will make a hard copy file of all documents, source code, plans, etc. generated by the team.
- The developer team will also copy of all material in electronic format on a CD-ROM.

4.11 Technical process plans

The Software Project Management Plan will specify the development process model, technical models, tools and techniques that will be used to develop the work products, project infrastructure and product acceptance plan.

4.12 Process Model

The XP (extreme Programming) agile process model will be follow during the project implementation.

4.13 Methods, Tools and Techniques

The project E-Commerce, adapts the system on Personal Computer using HTML, PHP, JavaScript, CSS, Visual Studio 2012, Notepad++ and MySQL for database management system. Additional tools that will be used are: Adobe Dreamweaver, Adobe Photoshop etc.

4.14 Infrastructure Plan

The hardware resources are three Intel Core2Duo Personal Computers running Windows XP/Vista or UBUNTU operating system. The project using software resources are like Notepad ++, Atom, Brackets, Adobe Photoshop, XAMPP e t c.

4.15 Product Acceptance Plan

Every milestone of the project will be accepted formally by the project manager by signing appropriate acceptance documentation. At the end of every phase the project manager will perform an acceptance test. This may result in additional requests for change and improvements. The project manager will test the final product/application for acceptance.

4.16 Supporting Process Plans

The Software Project Management Plan will include the plans for the supporting processes that are part of the software project. These plans include: configuration management plan, verification and validation, software documentation, quality assurance, reviews and audits, problem resolution and subcontractor management.

4.17 Configuration Management Plan

All the project deliverables are to be considered as configuration items. The configuration item as well as its file would be named after the document like SOW, SRS and followed by the version number. For example, all the preliminary versions that are submitted to the project manager for review would be named with the abbreviation followed by 0.1, 0.2. After the project manager approves the basic SPMP, this baseline document will be version 1.0 and is distributed to the project members. Informal updates with the project manager will be numbered with 1.1, 1.2, etc. and the next full distribution to the committee would be version 2.0, etc.

4.18 Verification and Validation Plan

The Software Project Management Plan for this project shall contain the verification and validation plan for the software project and it shall include tools, techniques and responsibilities for the verification and validation work activities. The verification and validation plan will be part of a separate document and will be maintained accordingly.

4.19 Test Plan

Test Cases:

Case- 1:

Project Name: Scholarship portal management system		Test Designed by: Bizary		
Test Case ID: FR_1		Test Designed date:22/05/2020		
Test Priority (Low, Medium, High): High		Test Executed by: Rafa		
Module Name: Login session		Test Execution date: 27/05/2020		
Test Title: Verify the login with valid username and password				
Description: Test the admin login page (backend)				
Precondition: User has valid username and password Dependencies: Cannot access via offline.				
Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**
1. Go to the site 2. Enter username 3. Enter password 4. Submit	Username: Prava Password: 4567a	User should login in to the page	As expected	Pass.
Post Condition: User is validated with database and successfully login to account.				

Case-2:

Project Name: Scholarship portal	Test Designed by: Bizary

management system				
Test Case ID: FR_2		Test Designed date: 22/05/2020		
Test Priority (Low, Medium, High): Medium		Test Executed by: Prava		
Module Name: Login Session		Test Execution date: 28/05/2020		
Test Title: Incorrect password attempt freeze the system for 30 minutes.				
Description: By providing incorrect password, lock the system for 30 minutes for maintains security.				
Precondition: Provide valid and invalid password Dependencies: can't access without providing valid password				
Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**
1. Go to the admin login section 2. Provide valid password 3. Provide invalid password for checking whether system freeze 30 minutes or not. 4.Click submit	Valid password:135 Invalid password:246	Freeze the system for exact 30 minutes.	System has frizzed	Pass
Post Condition: Lock out for 30 minutes.				

Case-3:

Project Name: Scholarship portal management system	Test Designed by: Bizary

Test Case ID: FR_3		Test Designed date: 22/05/2020		
Test Priority (Low, Medium, High): High		Test Executed by: Isrita		
Module Name: System access		Test Execution date: 28/05/2020		
Test Title: The system shall accessible via the internet.				
Description: Test the system which is accessed via the internet.				
Precondition: Need an internet connection. Dependencies: Can't access via offline.				
Test Steps	**Test Data**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**
1. At first connect with the internet. 2. Access the system from a browser.	System address/IP address.	User can see the login page.	User can view	Pass
Post Condition: User can see the system login page.				

4.20 Documentation Plan

The IEEE standards would be followed for all documentation purposes. All the documents would be discussed and reviewed with project manager before their baseline versions are issued and distributed to the members of the committee on the due dates.

4.21 Quality Assurance Plan

The quality of our project will be maintained and checked by the project manager. He will assure that this project is maintaining the quality.

4.22 Reviews and Audits Plan

Review and Audits would be addressed as a part of the Software Quality Assurance and Verification & Validation Plan that would be developed following recommended departmental standards.

4.23 Problem Resolution Plan

All problems would be resolved informally the developer and the project manager. That is, there is no specific plan. However, the Software Project Management Plan will be updated accordingly should the need for such a plan arises.

4.24 Subcontractor Management Plans

The project does not have any plan for managing subcontractors that may contribute work products to the software project.

4.25 Process Improvement Plan

After the development, the project will be regularly checked by the project manager and he will suggest the developers if any kind of improvement is needed.

REFERENCES:

1. http://en.wikipedia.org/wiki/Risk_management
2. http://en.wikipedia.org/wiki/Software_project_management
3. https://www.slideshare.net/kasiannapurna54/documentation-46316879
4. http://www.cips.org.in/documents/2013/2nd-4th_Sept/online-scholarship-management-system-kerala.pdf
5. https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database
6. https://fluidreview.com/scholarship-management-software/
7. https://pmstudycircle.com/2012/10/assumptions-and-constraints-in-project-management/
8. https://studyportals.com/
9. https://dinus.ac.id/repository/docs/ajar/Sommerville-Software-Engineering-10ed.pdf
10. https://www.academia.edu/24648944/SOFTWARE_REQUIREMENTS_SPECIFICATION_SRS_FOR_STUDENT_INFORMATION_MANAGEMENT_SYSTEM
11. http://www.cse.msu.edu/~cse870/IEEEXplore-SRS-template.pdf
12. https://iansommerville.com/software-engineering-book/web/domain-requirements/