Charusat Quora

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Preface

This report includes the software management plan created by our team. These report passes the team members and supervisor checks. This report covers a summary including purpose, summary, objectives, constraints, schedule, and budget summary. Moreover, this report contains managerial process like estimation, staffing resource allocation, quality control and risk management plans.

Revision History

Version History			
Version	**Status***	**Date**	**Version Definition**
1	Released	06-09-2021	SPMP 1.0

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1. Overview

1.1 Project Summary

1.1.1 Purpose, Scope and Objectives

1.1.1.1 Purpose

Charusat Quora is the follow-up of the existing Quora website to answer and ask queries for local Charusat University. This product replaces the existing Quora due to local needs of Charusat people to sought out locally.

1.1.1.2 Scope

Q&A software is often provided to corporate and specialist sites, so the site and its users can be asked questions as well as provide or receive expert answers to them. This kind of software is particularly useful for responding to questions regarding specific organization. Users may learn by regularly answering questions or exchanging views with other organization staff and community using the website. However, in recent years, community Q&A sites tend to embrace newer interaction designs than the other types of Q&A sites, by providing features like tagging and rating interfaces, RSS feeds, and highly interactive browsing and searching capabilities. These features used the crowd power to evaluate the quality of answers and also the reliability of the contributors. Some communities as stack-overflow tags the users received highest votes in a given domain as "Excellent answer provider". These new features generally integrate expert verification and service into Q&A community sites.

1.1.1.3 Objectives

- The SRS will provide a detailed description of the Charusat Quora. This document will provide the outline of the requirements, overview of the characteristics and constraints of the system.
- **Section 2:** This section of the SRS will provide the general factors that affect the product and its requirements. It provides the background for those requirements.

The items such as product perspective, product function, user characteristics, constraints, assumptions and dependencies and requirements subsets are described in this section.

- **Section 3:** This section of SRS contains all the software requirements mentioned in section 2 in detail sufficient enough to enable designers to design the system to satisfy the requirements and testers to test if the system satisfies those requirements.

1.1.2 Assumptions & Constraints

1.1.2.1 Assumptions

- The users should have basic knowledge of computer.
- The computers of user should have Internet connection and Internet server capabilities.

1.1.2.2 Constraints

- The user should be a member of Charusat University.
- A web browser should be installed on all computer of user.

1.1.3 Project Deliverables

Table 1. Project Deliverables

Work Product	Description	Delivery Date
Problem Statement	Define the problem (submitted)	20-07-21
Initial Plan	Define the technical and managerial processes (submitted)	27-07-21
Reviewed Initial Plan	Revised version(submitted)	03-08-21
SPMP Document	Software Project Management Plans is used to define the scope, purpose and objectives of the project, to	10-08-21

	specify roles and responsibilities of team members, the customer company if it exists. Many plans are considered in order to define the assumptions and constraints of the project. It defines which process model is chosen for the project life cycle. It is used to document agreed deliverables and their dates.	
Reviewed SPMP Document	Revised Version	06-09-21
Reviewed SRS Document	Software Design Description is used for complete description of design of the software of the system to be developed. It documents all the information about the design. It specifies the form of the document used to specify system architecture and application design in a software related project.	27-08-21
SDD Document	Software Design Description is used for complete description of design of the software of the system to be developed. It documents all the information about the design. It specifies the form of the document used to specify system architecture and application design in a software related project.	11-09-21
Reviewed SDD Document	Revised version	19-09-21
Presentation	During the semester 2 presentations will be done which reflects the work we done during project development.	31-08-21

STD Document	Software Test Documentation is used to describe plans for testing the software. Any	05-10-21
	verification and validation activity.	
Reviewed STD Document	Revised Version	12-10-21
Presentation	During the semester 2 presentations will be done which reflects the work we done during project development.	19-10-21
Final Versions of documents	All documents are given with last versions.	29-10-21
Project Submission		29-10-21

There will be four major deliverables in the project which are SPMP, SRS, SDD, and STD.

All these documents will be prepared according to the IEEE standards.

These deliverables can be downloaded from our website. Each and every updates of those deliverables will be announced from the website as well.

1.1.4 Schedule and Budget Summary

We estimate schedule allocation in section 5.2.4 combining with budget allocation.

1.2 Evolution of the SPMP

After this report, team members and advisors with the new additions are possible.

1.3 References

- IEEE Std 1058-1998, IEEE Standard for Software Project Management Plans
- Pressman, Roger S., Software Engineering, 4th edition, McGraw-Hill, 1997
- Fairley, R. E., Work breakdown Structure, Software Engineering Project Management, IEEE CS Press, 1997

2. Project Organization

2.1 External Interfaces

This project will controlled by project supervisor and quality group in each step. Supervisor will determine mistakes on project before implementation. After the development team correct the mistakes, documents are delivered as a new version.

2.2 Internal Structure

Table 2. Internal Structure

Phases	**Responsibility**
Project Management	Project Manager
Web Development	Web Developer
Documentation	Documentation
Testing & Maintenance	Tester
UI Design	Designer

2.3 Project Responsibilities

Table 3. Project Responsibilities

Member Name	**Responsibility**	**E-Mail**
Vatsal Bhingradiya	UI Designer	19ce011@charusat.edu.in
Nikunj Bhimajiyani	Database Administrator	19ce007@charusat.edu.in
Bhargav Chaudhary	UI Designer	19ce015@charusat.edu.in
Vansh Desai	Tester, Algorithm Master	19ce018@charusat.edu.in
Yagnik Desai	Developer, Documentation	19ce019@charusat.edu.in

3.1 Start-up Plan

This section contains our project's estimation plan, staffing plan, resource acquisition plan, and training plan. In the following subsections, all these plans will exist with their explanations in the details.

3.1.1 Estimation Plan

The beginning of a project, it is difficult to predict. This report is the first design of SPMP, we cannot expect an adequate data. Using the following function points, we will predict our estimation plan.

Table 4. Unadjusted Function Point Calculation

		Weighting factor			Count
		Simple	Average	Complex	
Inputs	User Login	3	4	6	4*6=24
	User Registration	3	4	6	
	User Profile Account	3	4	6	
	Add Question Data	3	4	6	
	Add Answer Data	3	4	6	
	Add Votes/Comments	3	4	6	
Outputs	Login Confirmation	4	5	7	4*5=20
	Questions	4	5	7	
	Answers	4	5	7	
	Profile	4	5	7	

Inquiries	Profile	3	4	6	3*2=6
	Comments	3	4	6	
Interfaces	Application to server database	5	7	10	2*7=14
	User to application database	5	7	10	
Total UFP					66

Calculation of Total complexity adjustment value

Table 3. Complexity Adjustment Value

No.	Characteristic	Count
1	Data Communication	5
2	Distributed data processing	4
3	Performance	5
4	Heavily used configuration	3
5	Transaction rate	3
6	Online data entry	4
7	End user efficiency	4
8	Online updating	3
9	Complex processing	2
10	Reusability	2
11	Installation ease	0

12	Operational ease	4
13	Multiple sites	0
14	Facilitate change	3
Total		42

PCA = 0.65 + 0.01*42
= 1.07
Adjustment Function point = 1.07 * 66
= 70.62
Assuming that the 1 FP is equal to 40 lines of Python code then,
LOC (Lines of code) = 40*70.62
= 2825
Then KLOC = 2.8
Effort of the project is E = a * (KLOC)^b
For the Organic project the value of a is 3.2 and value of b is 1.05. Therefore value of effort is = 3.2 * (2.8)^1.05.
= 15 person-month
Duration of the project is M = a * (E)^b
a = 2.5 b = 0.38 M = 2.5 * (15)^0.38
= 6 months
Suppose the average monthly salary of each software developer is Rs. 30,000. Cost of the project is = 30000 * 15
= Rs 4,50,000.00 .

3.1.2 Resource Acquisition Plan

Considering the average hardware requirements for the application development team, the resources will be acquisitioned. The average hardware resources necessary for our project are as follow:

- Processor – Intel Core 2 Duo
- RAM – 2 GB
- HDD – 500 MB
- Network Interface Card (NIC)
- Intel HD Graphics 420

Hence, a PC or laptop that fulfills the above mentioned resources are required for the development team.

In addition to these HW requirements, also the following SW requirements should be satisfied:

- MS Visual Studio Code
- MS Project
- MS Visio
- MS Office
- Chrome Browser

3.1.3 Project Staff Training Plan

The application development team of Team Soul Tackers will perform accelerated learning using online resources and implement the necessary modules. They will continuously search about this project. When they meet, they transfer knowledge from member to another. The team members already have basic knowledge and experience of working on required tools. They will learn and gain the knowledge to develop and fulfill the complexity of this system.

3.2 Work Plan

4.2.1 Work Activities

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
	Requirement Analysis and Gathering	7 days	Sat 17-07-21	Mon 26-07-21		Bhargav,Nikunj,Vansh, vatsal,Yagnik
	Formal Analysis And Project Functionalities Analysis	2 days	Tue 27-07-21	Wed 28-07-21	1	Vansh
	Preproject Documentation	7 days	Thu 29-07-21	Fri 06-08-21	2	Yagnik
	Design	8 days	Mon 09-08-21	Wed 18-08-21	3	Bhargav,Nikunj,vatsal
	UI Development	14 days	Thu 19-08-21	Tue 07-09-21	4	Bhargav,Nikunj,vatsal
	Backend Development	17 days	Wed 08-09-21	Thu 30-09-21	5	Vansh,Yagnik
	Testing	3 days	Fri 01-10-21	Tue 05-10-21	6	Vansh,Yagnik
	Documentations	6 days	Wed 06-10-21	Wed 13-10-21	7	Yagnik

Figure 1. Work Plan

3.2.2 Schedule Allocation

The following figure shows the Gantt Chart and Network Diagram that describes the schedule allocation of the project.

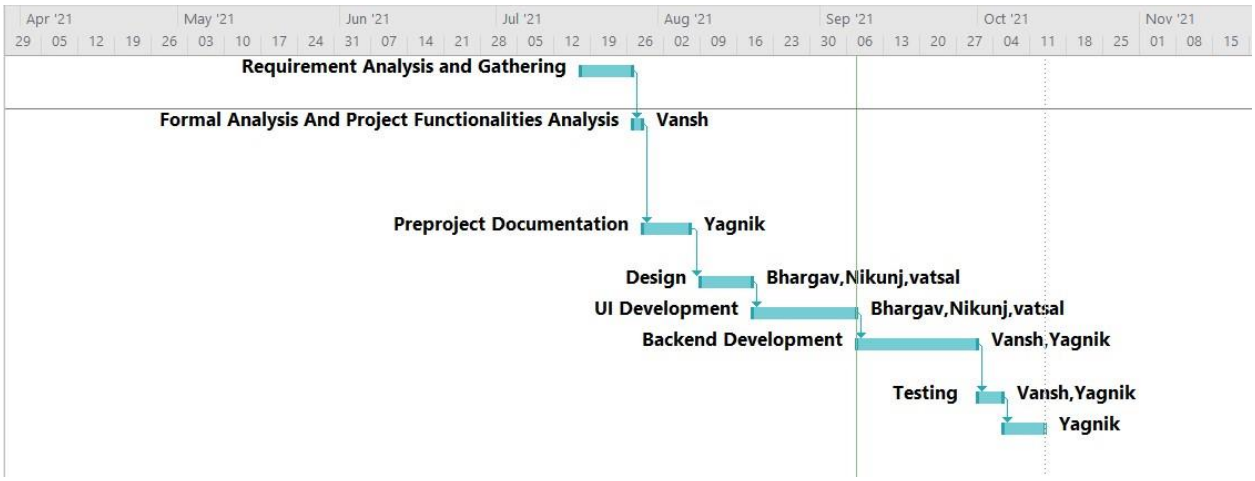

Figure 2. Gantt Chart

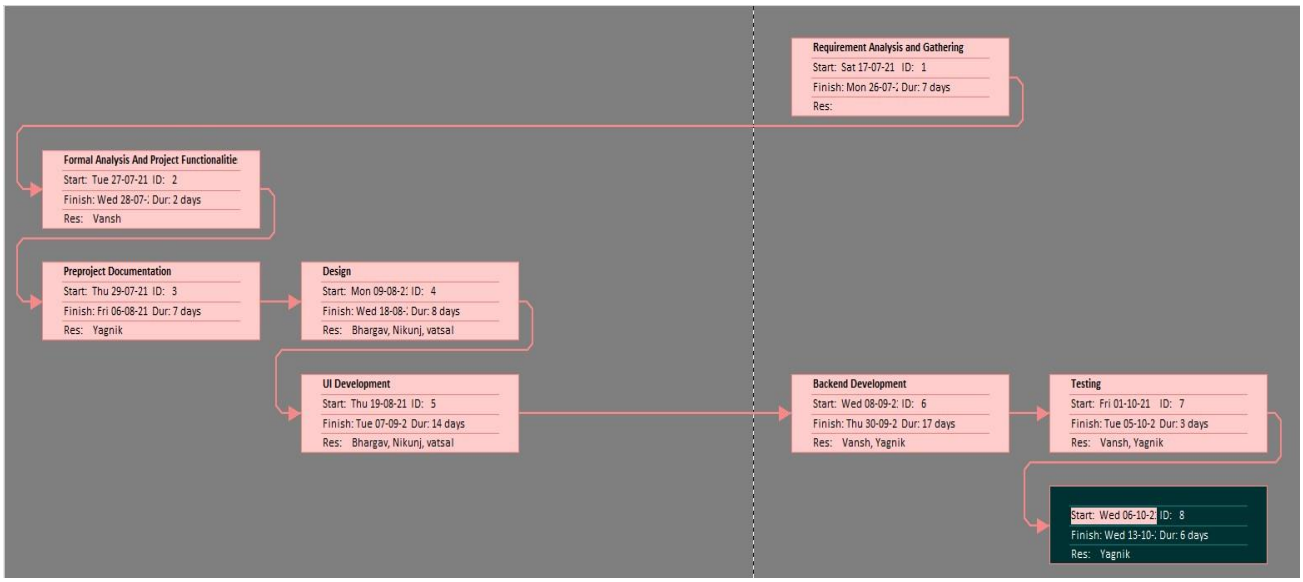

Figure 3. Network Chart

3.2.2 Resource Allocation

Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base
Nikunj	Work		N		100%	₹ 600.00/hr	₹ 0.00/hr	₹ 0.00	Prorated	Standard
vatsal	Work		v		100%	₹ 600.00/hr	₹ 0.00/hr	₹ 0.00	Prorated	Standard
Bhargav	Work		B		100%	₹ 600.00/hr	₹ 0.00/hr	₹ 0.00	Prorated	Standard
Vansh	Work		V		100%	₹ 600.00/hr	₹ 0.00/hr	₹ 0.00	Prorated	Standard
Yagnik	Work		Y		100%	₹ 600.00/hr	₹ 0.00/hr	₹ 0.00	Prorated	Standard

Figure 6. Resource Allocation