SWE 387

Software Project Management Plan (SPMP)

The document in this file is an annotated outline for specifying Software Project Management Plan, adapted from the IEEE Standard for Software Project Management Plans (Std 1058-1998) and from other online resources.

Tailor this to your needs, removing explanatory comments as you go along. Where you decide to omit a section, you might keep the header, but insert a comment saying why you omit the data.

Project Plan
for
<Champions>

<Team 2>

<1.0>

<6 Dec 2020>

Document History and Distribution

1. Revision History

Revision #	Revision Date	Description of Change	Author
1.0	2020/10/9	Initial Document	Team members
1.1	2020/10/12	Review before submission	Team members
1.2	2020/12/2	Final Document	Team members
1.3	2020/12/5	Review Final Document	Team members

Contents

1. Overview

For gamers, community leaders and tournament organizers. **Who** need to find, join and manage communities and tournaments. Also, they need to look at leaderboards. **Champions** is an online platform system **that** will allow users to participate in tournaments, create communities and share content such as tournament news, media, and games. **Unlike** the current platforms where it is designed for specific games or it's not purpose specific for gaming tournaments and communities, **our new product** will enable gamers from different games to join each other to compete and communicate with each other.

2. Goals and Scope

2.1 Project Goals

1. The system shall be completed with high level of usability.
2. The project shall payback within one year of the system's launch.
3. The system shall facilitate communication tournament organizers and gamers.
4. The project shall make profit to allow us to maintain and add new features to the system for the end users.
5. The system shall be available on IOS and android platforms.
6. The system shall allow players to build a career as professional players in their respective games.
7. The system shall facilitate partnerships between gamers and leading game developers.
8. The system shall be the destination for the latest information regarding tournaments.
9. Champions must be one of the top 3 highest visited platforms within 2 years.
10. Users can join tournaments in 5 clicks or less.
11. Grow the company's reputation in the industry to garner more projects in the future.

2.2 Project Scope

2.2.1 Included

- Manage a gaming community (add, join, update etc.)
- Manage a tournament group (add, join, update etc.)
- Search (community, tournament, team etc.)
- Content sharing
- User profile management
- Leaderboard management
- Administrator account to manage the system
- Application maintenance for fixing bugs for one year after the launch of the system
- The ability to link accounts from different platforms to the system

2.2.2 Excluded

- Advertisement for the platform.
- Servers and server maintenance costs.
- Training of how to use the platform.
- Developing games.
- Adding new features.
- Individuals are not allowed to challenge each other, challenges only through tournaments.
- Live streams from tournaments will not be hosted on the platform

2.3 Assumptions

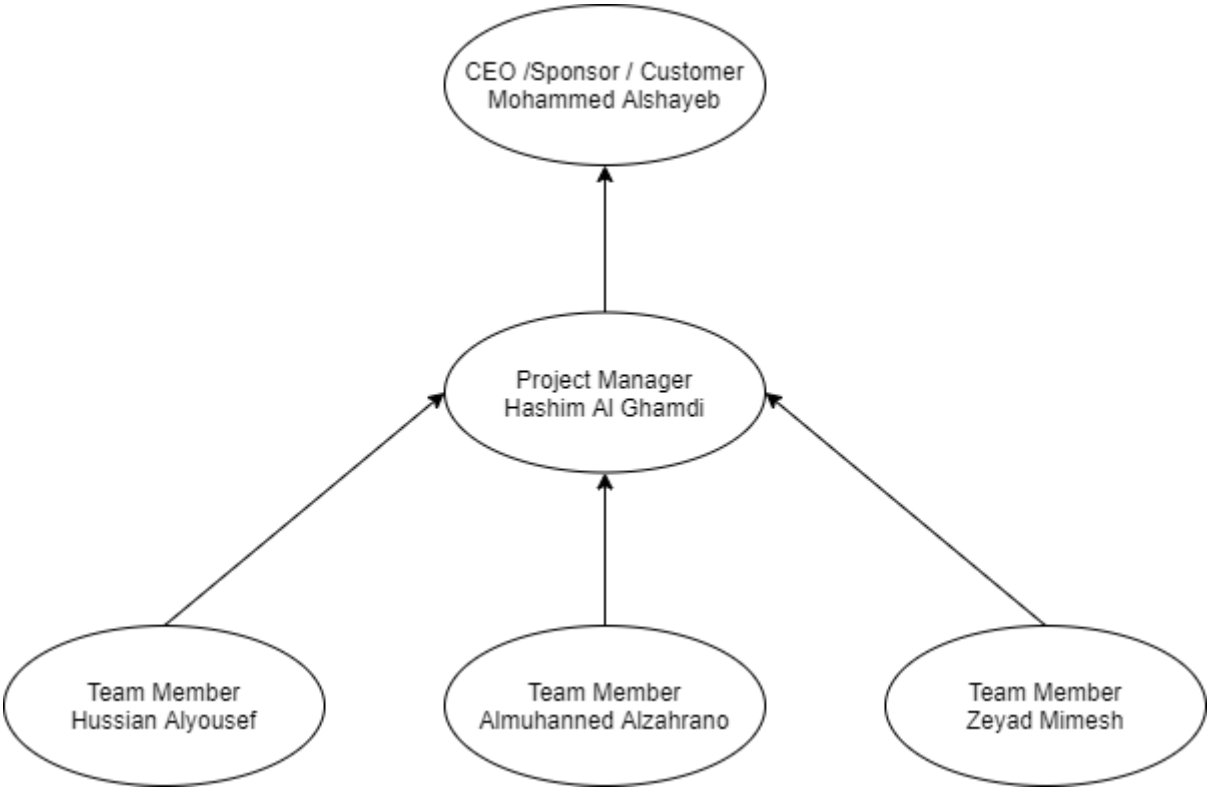
- We have a business case study and financial analysis for the project.
- Fees are paid by the costumers.
- Tournament administration is a responsibility of tournament creators.
- Age restrictions depend on age rating of the game and tournament creators.
- For a tournament to be in the system it should require the approval of the administration of the application and any other approval from outside parties and does not violate any set of regulations

2.4 References

<Doc. 1.>	Project Proposal for <Champions>
<Doc. 2.>	Project_Guidelines_201
<Doc. 3.>	Business case study
<Doc. 4.>	Financial analysis
<Doc. 5.>	Make/buy analysis
<Doc. 6.>	Software Project Management Plan template
<Doc. 7.>	Information Technology Project Management book
<Doc. 8.>	Course SWE387 Slides

3. Project Organization

3.1 Project Organizational Structure

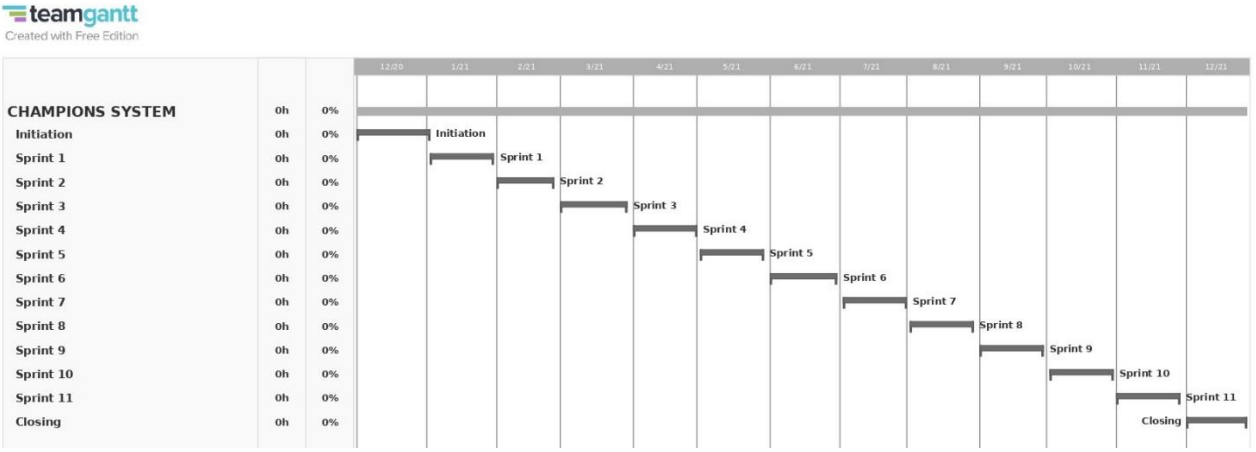


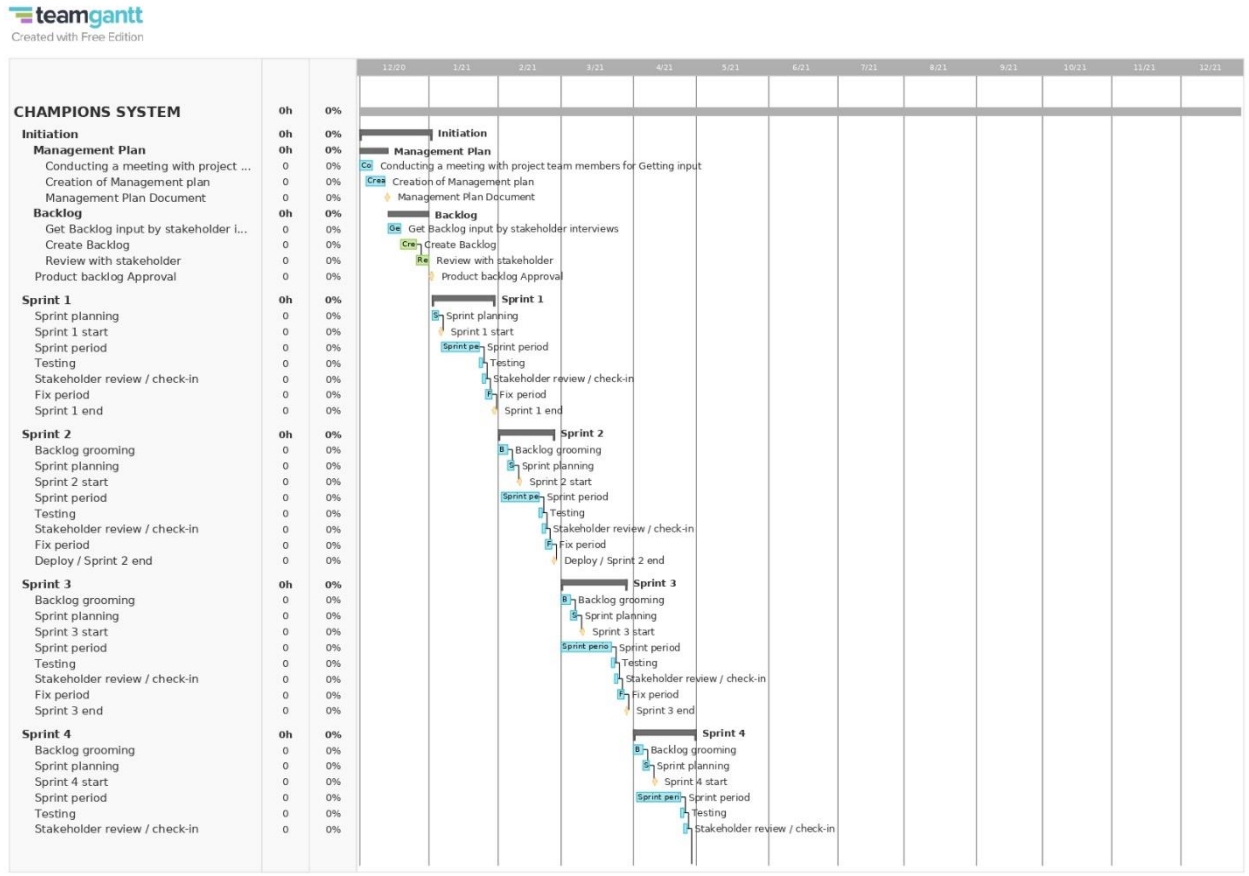
3.1.1 Project Team

Team member	Role	Involvement duration	Comment
Hashim Al Ghamdi	Project Manager	12 months	
Hussain Alyousef	Software Architect	4 months	
Almuhannad Alzahrani	Quality Assurance	7 months	Inside consultant
Zeyad Mimesh	UX / Gamer	12 months	On-site expert

4. Schedule and Budget

4.1 Schedule and Milestones





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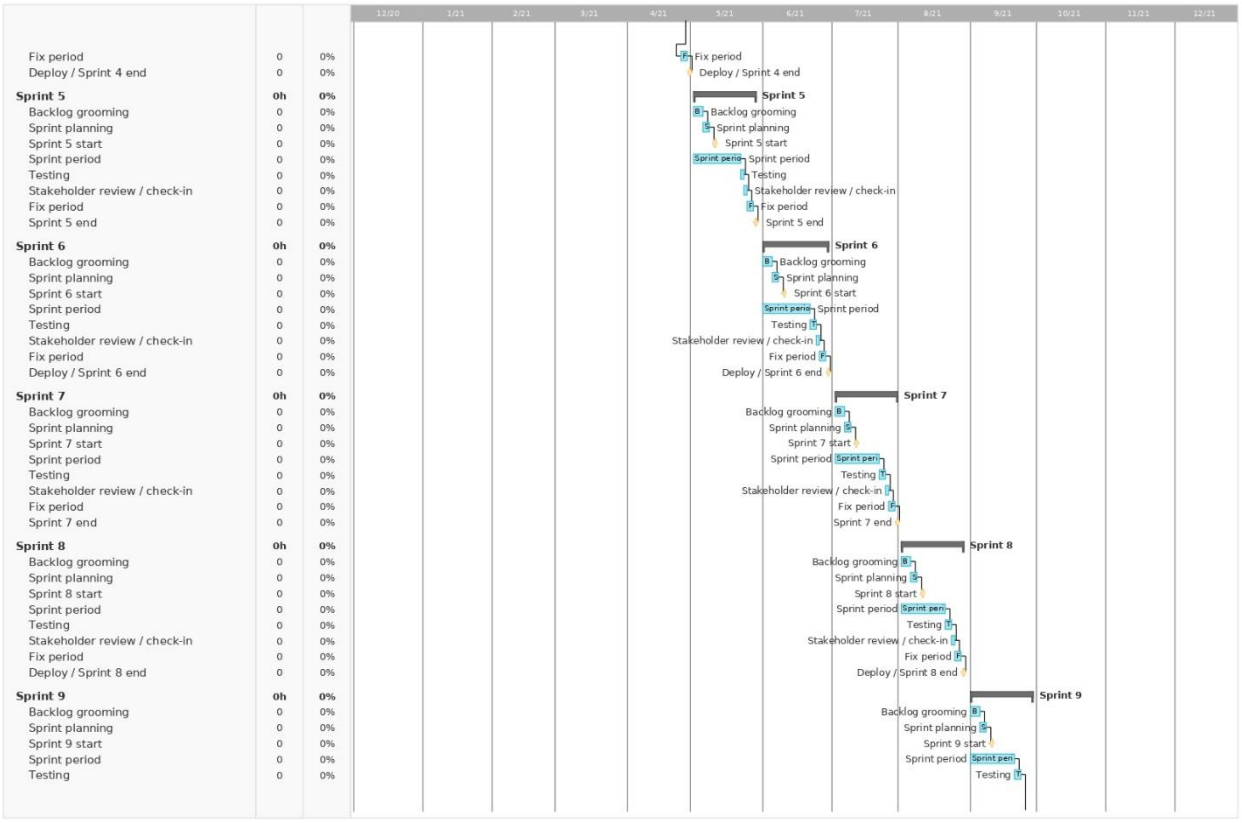

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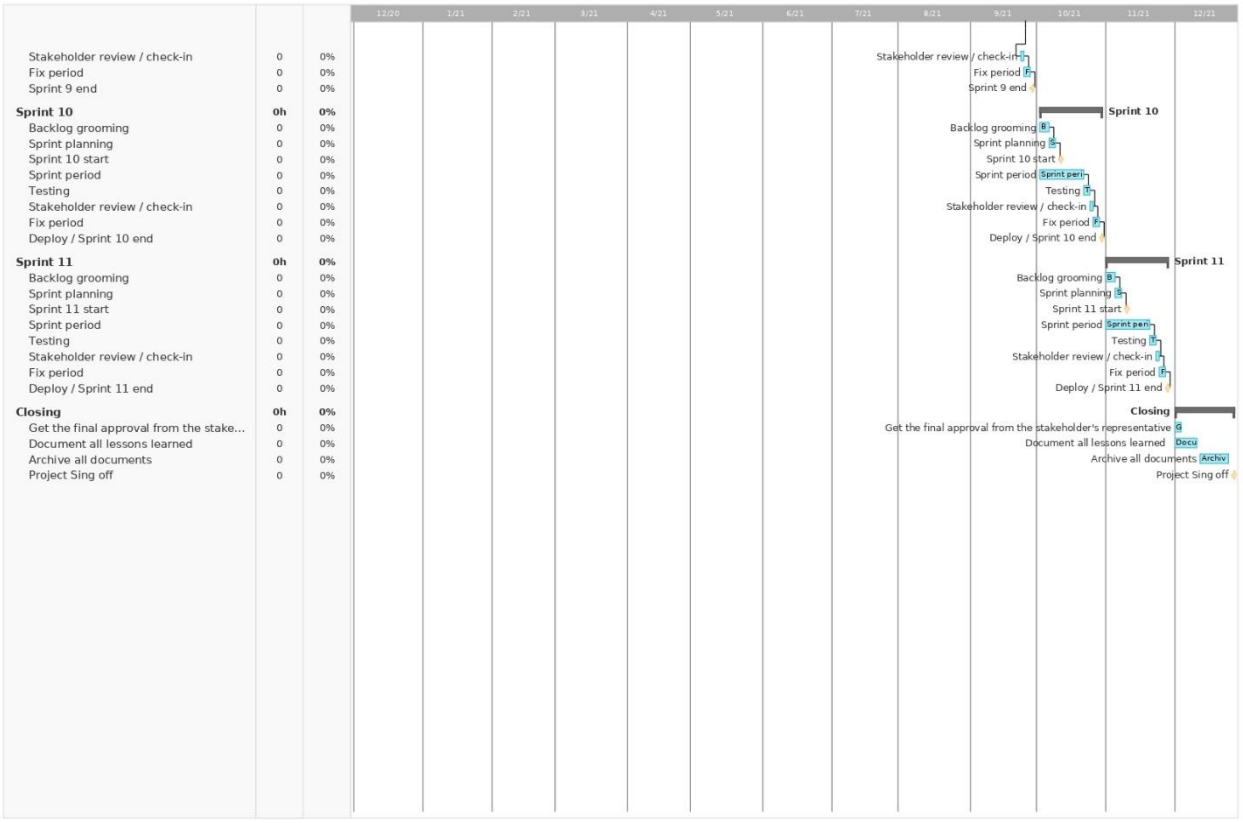


4.2 Cost and Budget

4.2.1 Cost estimation

The cost estimate:

	#Unit	Cost/Unit/Hr	Cost/Person/Month (8 hours/ day)	
WBS Items				
1. Development and Testing				Totals
Project Manager	1	SAR120.00	SAR28,800.00	SAR 345,600.00
Project team members	2	SAR70.00	SAR16,800.00	SAR 33,600.00
Requirements Engineers	2	SAR50.00	SAR12,000.00	SAR 24,000.00
2. Hardware		Cost/Unit		
Servers	3	SAR7,000.00	SAR7,000.00	SAR 21,000.00
3. Software				
Software Development				SAR 1,587,600.00
Testing (10% of total hardware & software cost)				SAR 160,860.00
Reserves (15% of total estimate)				SAR 322,299.00
Total Cost				SAR 2,494,959.00

Software development estimation based on two methods:

	#Unit	Cost/Unit/Hr	Cost/Person/Month 8 hours/ day	
WBS Items				
1. Labor Estimate				Totals
Software Designers	2	SAR90.00	SAR21,600.00	SAR 172,800.00
Programmers	4	SAR50.00	SAR12,000.00	SAR 432,000.00
Testers	3	SAR65.00	SAR15,600.00	SAR 421,200.00
UI/UX Designers	2	SAR55.00	SAR13,200.00	SAR 237,600.00
QA Consultant	1	SAR150.00	SAR36,000.00	SAR 324,000.00
Sum of Labor Costs				SAR 1,587,600.00
2. Function Points		Conversion Factor	Function Points	
External inputs	15	6	90	
External interface	6	10	60	
External outputs	10	12	120	
External queries	7	5	35	
External internal tables	8	11	88	
Total function points			393	
Average of programming language used in the company equivalency value				52
SLOC estimate				10,500
Productivity x KSLOC^Penalty				42.26
Total labor hours				10,611
Cost/ labor hour (SAR150/hour)				SAR 150.00
Total function point estimate				SAR 1,591,650.00

4.2.2 Budget

All units are in SAR

WBS	#Unit	Cost/Unit/Hr	Cost/Person/Month (8 hours/ day)	Month													
1. Development and Testing				1	2	3	4	5	6	7	8	9	10	11	12	Totals	% of Totals
Project Managers	1	120	28800	28800	28800	28800	28800	28800	28800	28800	28800	28800	28800	28800	28800	345600	15
Requirements Engineers	2	70	16800	33600	0	0	0	0	0	0	0	0	0	0	0	33600	1
Software Designers	2	90	21600	43200	43200	0	0	43200	43200	0	0	0	0	0	0	172800	8
Programmers	4	50	12000	0	48000	48000	48000	48000	48000	48000	48000	48000	48000	0	0	432000	19
Testers	3	65	15600	0	46800	46800	46800	46800	46800	46800	46800	46800	46800	0	0	421200	18
UI/UX Designers	2	55	13200	26400	26400	26400	26400	26400	26400	26400	26400	26400	26400	26400	26400	316800	14
QA Consultant (from the company)	1	150	36000	0	0	36000	36000	36000	36000	36000	36000	36000	0	0	0	252000	11
2. Hardware		Cost/Unit															
Servers	3	7000	7000	0	21000	0	0	0	0	0	0	0	0	0	0	21000	1
Reserves (15% of total estimate)																299250	13
Total Project Cost																2294250	100

5. Management Plans

5.1 Integration Management

5.1.1 Configuration Management Plan

Github will be the tool that will be used for configuration management plan, as it has many features that are necessary for the project. The team members will use Github to upload the codes and documentation. Each team member will see what the others have attributed to the project, and what changes have been made the project. Regarding the release cycle, we are planning to make a release after 2 sprints, which is 2 months.

Github also automates these procedures. Programmers will upload the work to the cloud, which will allow their collages to check their work and discuss what they have done and make changes if needed.

5.1.2 Change management plan

The project manager will receive change requests to the project and has approval authority for any changes to the project.

Every team leader (requirements team, design team etc.) in the project is authorized to submit changes to the project.

Projectmanager.com will be used to track and monitor changes to the project.

5.1.3 Delivery Plan

#	Deliverable	Planned Date	Receiver
D1	Project management plan	2020/12/13	Customer representative
D2	Product backlog	2020/12/31	Customer representative
D3	(Sprint 2) features	2021/2/24	Customer representative
D4	(Sprint 4) features	2021/4/28	Customer representative
D5	(Sprint 6) features	2021/6/29	Customer representative
D6	(Sprint 8) features	2021/8/29	Customer representative
D7	(Sprint 10) features	2021/10/28	Customer representative
D8	(Sprint 11) features	2021/11/28	Customer representative
D9	The whole system	2021/12/27	Customer representative

5.2 Scope Management Plan

For the scope management, Requirement Engineer leader will be responsible for managing the scope. In addition, the project manager will have the authority to approve any change to the scope.

About the scope change prosses, a request for change will be created by either the requirement engineers or customer representative. Then requirement engineers will give their opinion regarding the change and how will affect the overall scope. Finally, a decision will be made by the project manager after taking into consideration all these information's.

customer representative will have the responsibility to accepting the final deliverable and approving the acceptance of project scope.

5.3 Procurement Management Plan

There will be no procurements that will be made for this project. All needed resources are available for the company. This decision was made based by reviewing the make/buy analysis document and project needs.

5.4 Schedule Management Plan

Scheduling for the project will be done using the tool [Insert tool name here].
The schedule will be done in the form of a Gantt chart. The Gannt chart will show the start and end of the project, how many sprints or phases there are during the project and how long will they take, what are the tasks to be done within phases or sprints, and what milestones are there for the project.

The schedule will be developed by the project manager and his team members. The project manager will hold meetings with the project staff to receive their input to estimate task durations. Project staff estimates will be evaluated based on past experience and finalized in the schedule. The project manager will also communicate with the product owner to present the scheduling results and discuss them.

5.5 Cost Management Plan

The project manager is the one who's responsible for managing costs of the project. As well as approving the budget and changes to it.

After the budget has been approved, finance department is responsible for giving the money.

For performance measurement, Expert judgment will be used as qualitatively measure and Earned Value Management (EVM) will be used as quantitative measure.

5.6 Quality Management Plan

Every employee is responsible for his job to be within quality stander's acceptance rang and the project manager is responsible for identifying which quality standards are relevant and how to satisfy them for the whole project. Such that the project will be on or above all quality standers in terms of (Functionality, Features, System outputs, Performance addresses, Reliability, Maintainability) and meets stakeholders' expectations. The project manager is ultimately responsible for the quality of the

whole project.
Quality assurance will be assigned to the company's quality assurance expert (Eng. Almuhannad Alzahrani). He is responsible for performing all activities related to satisfying the relevant quality standards which were determined by the project manager.
Errors better to be prevented rather than corrected and tests will be conducted through every phase of the product life cycle to ensure whether it is accepted or if it needs to be reworked or adjusted. Checksheet may be used to ensure that each task will be accomplished, and cause-and-effect diagram will be used at the end of each phase to be avoided in the future.

5.7 Resource Management Plan

The key recourses that are going to be needed for the project are:

- The project manager
- 2 requirements engineers
- 2 software designers
- 4 programmers
- 3 testers
- 2 UI/UX designers
- 1 QA consultant

Here's a calendar showing each resource's duration and time of involvement:

Resource	Duration of involvement	Time of involvement
Project Manager	12 months	2020/12/6 - 2021/12/30
Requirements engineer 1	1 month	2020/12/6 - 2020/12/31
Requirements engineer 2	1 month	2020/12/6 - 2020/12/31
Software designers 1	4 months	2020/12/6 - 2021/1/28 & 2021/4/4 - 2021/5/27
Software designers 2	4 months	2020/12/6 - 2021/1/28 & 2021/4/4 - 2021/5/27
Programmer 1	9 months	2021/1/3 - 2021/9/30
Programmer 2	9 months	2021/1/3 - 2021/9/30
Programmer 3	9 months	2021/1/3 - 2021/9/30
Programmer 4	9 months	2021/1/3 - 2021/9/30
Tester 1	9 months	2021/1/3 - 2021/9/30
Tester 2	9 months	2021/1/3 - 2021/9/30
Tester 3	9 months	2021/1/3 - 2021/9/30
UI/UX designer 1	12 months	2020/12/6 - 2021/12/30
UI/UX designer 2	12 months	2020/12/6 - 2021/12/30
QA Consultant	7 months	2021/2/7 - 2021/10/26

5.8 Communication Management Plan

Since this project will use Scrum as the development process, the Scrum team and ScrumMaster will meet daily for reporting their progress and after each sprint for reporting what has been done throughout the sprint. For non-development activity, reporting shall be done weekly.

For daily reporting, it contains what they have done the day before and what they are planning to do today. All other reports shall include report title, who provide the information, who will receive it, short description, table of content, and a summary.

For daily reporting, it will be an informal conversation between the team (Interactive communication). All other reports shall be written, documented, and posted in knowledge repositories (Pull communication).

For daily reporting, it will be a stand-up meeting. All other meetings shall be conducted in the meeting room as usual.

For daily reporting, all team members provide and receive the information's between them. The receiver for all other reports is the project manager and the provider will be the team leaders for each team. For other reports, the responsibility for providing the reports is on the accountable person for that activity

After each sprint, one representative from the project team will meet with the client representor to take their input regarding the sprint deliverable. If face to face meeting cannot be scheduled, an online meeting shall be used. For any formal request, it shall be done either from formal email or formal meeting and shall be documented.

5.9 Risk Management

At the beginning of the project, risks will be identified using Common Sources of Risk studies and brainstorming and documented in the risk register. Then two analysis (qualitative and quantitative) will assess the identified risks (mainly Probability/impact matrixes for qualitative and Decision tree for quantitative). After the assessment of the identified risks, the low priority and low probability risks will be moved to the watch list. In addition, basic response strategies for negative and positive risks will be used to plan how the project team will handle them once they arise. If a risk occurs, then the project team will execute what have been planned. After each sprint, a risk review will be conducted to monitor and update the identified risks and check if a risk in the watch list become more likely to occur.

The responsibility of Planning, Identifying, and Monitoring risks with Performing qualitative and Performing quantitative risk analysis and Planning and Implementing risk responses is undertaken on the project manager.

5.9.1 Risk Register

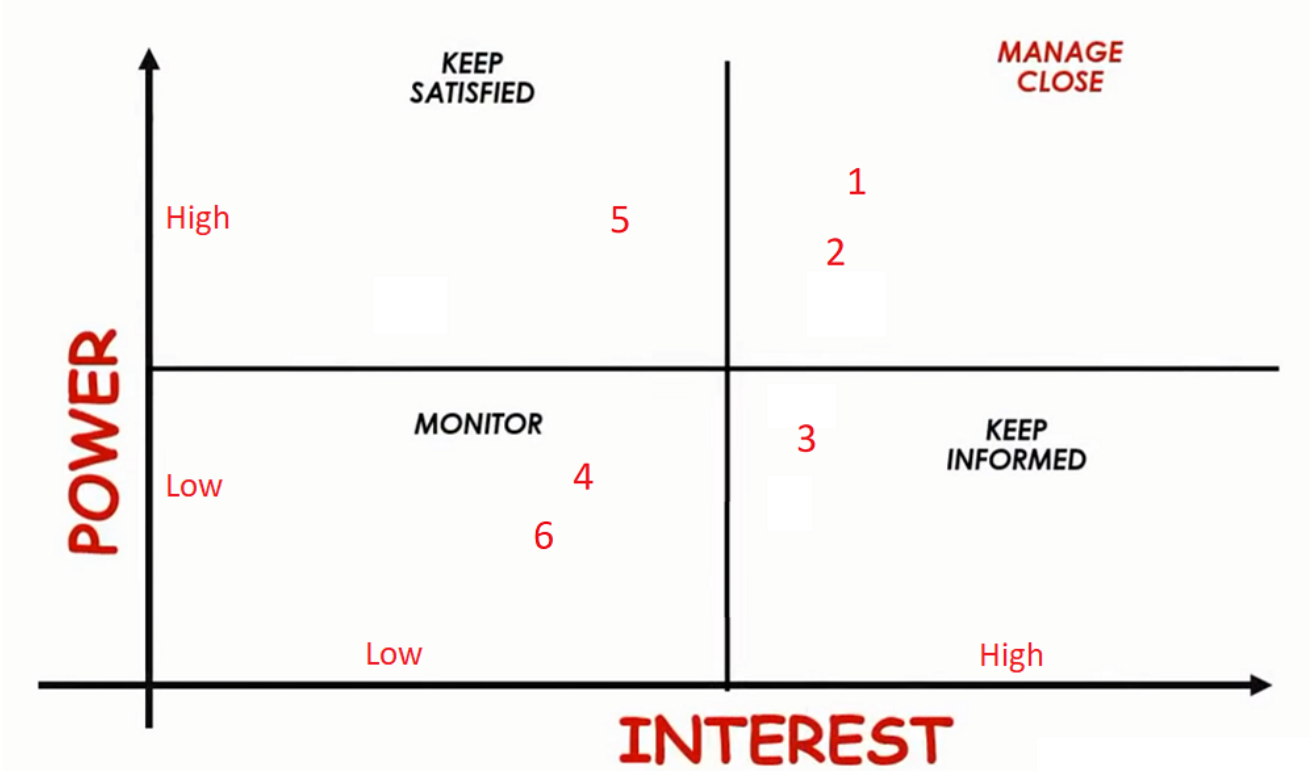
*The risk register is attached as am excel sheet with this document.

5.10 Stakeholders Management Plan

In this project, we will use stakeholder register to identify the stakeholders. For stakeholder management, a power/interest grid will be used. Where :

- The high-power and high-interest group should be managed with the utmost care.
- High-power and low-interest stakeholders should be kept satisfied.
- The low-power and high-interest stakeholders should be kept informed.
- The low-power and low-interest groups require the least effort. They should only be monitored.

ID	Name	Position	Internal/ external	Project Role	Contact Info
1	Ahmed	CIO	Internal	Senior Manager	Ahmed@mail.com
2	Nawaf	CFO	Internal	Senior Manager	nawaf@mail.com
3	Khalid	IT analyst	Internal	Team Member	Khalid@gmail.com
4	Sara	Accounting	Internal	Senior Manager	sara@mail.com
5	Adam	UI design	External	Consultant	adam@mail.com
6	Suppliers	Suppliers	External	Supply software	suppliers@mail.com



6. Development Process

In this project, Agile process will be used to develop the product (mainly Scrum). It basically starts with the creation of the product backlog by the product owner (who will be one from the customer side). Then, our team will create the sprint backlog and go throw the sprint to develop the product incrementally. At the end of a sprint, most of the time some functionalities will be delivered to the customer and these steps will be repeated until the development of the product reach an end.

Among all other processes, Agile allows requirements to be changed flexibly and this works well with mobile application development since the requirements there change rapidly. In addition, it also seeks for customer collaboration and satisfaction over negotiation which contributes positively to the organization's goals. Moreover, the team responsible for developing this product has a successful experience with Scrum which will lead to the success of the project. For these reasons, Agile process is the choice.

7. Abbreviations and Definitions

WBS: Work package structure
UI: User interface
UX: User experience
SLOC: Source lines of code
EVM: Earned value management
QA: Quality assurance
Leaderboard: Ranking of players in a video game based on their total score
CIO: Chief information officer
CFO: Chief financial officer