



Project Management in Engineering

Homework 3

Group Members:

Student Name:

Student Number:

İrem Öztürk
Greta Isaraj
Fatima Rahimova
Aleksja Braka

150170100
150180924
150180905
150160916

Project Proposal

➤ **Project Name:** SuitUP!

➤ **Introduction**

In today's world, many people shop frequently to meet their clothing needs. On the other hand, due to some reasons, people prefer to shop online. But at the same time, people do not want to buy products that they have not seen or tried by dressing. There is not yet a platform where people can see the quality of the clothes they like before they buy them and try them without leaving the home. The SuitUP! project is designed to meet all these needs.

➤ **Background**

Online shopping is one of the most popular online activities worldwide. In 2018, the global penetration rate of digital buyers was 47.3 percent. Regarding mobile shopping in particular, on their cellphones, 67 percent of consumers admit to window shopping for amusement. Especially gen Z is taking over the online world and everything is getting digitalised, two far away corners of the world are exchanging goods. Youngsters buy goods of different cultures in an attempt to fit in, embrace other cultures or just because they heard about a product a lot from their online friends. Specific goods are sold only in certain countries, but social media does its job and lures young people to buy a lot. Gen Z is going to take over the market in a couple of years. Currently, 93% of parents claim their Gen Z child has an impact on household budget. Moreover, the “crazy sale days” such as Black Friday and Cyber Monday create competition between customers so they always rush to order online. All being considered, customer satisfaction is quite important as the contrary would not only disappoint them but would cause issues at the shops, clothes being sent back, refunds etc. In an attempt to solve this issue, an application that meets buyers with the opportunity to “try clothes on” online would bring online shopping closer to the ideal one. As 95% of today’s generation have their own mobile phones and use them frequently, a mobile application that grants such a service would be a pretty good solution.

➤Goals:

The main goal of the project is adding ease to people's daily life by implementing a platform which allows us to try out the clothes we need where we want so we don't have to go to the store for this reason.

Additionally, by facilitating work of business and people, many stores will be contributed and benefited as another goal of the project.

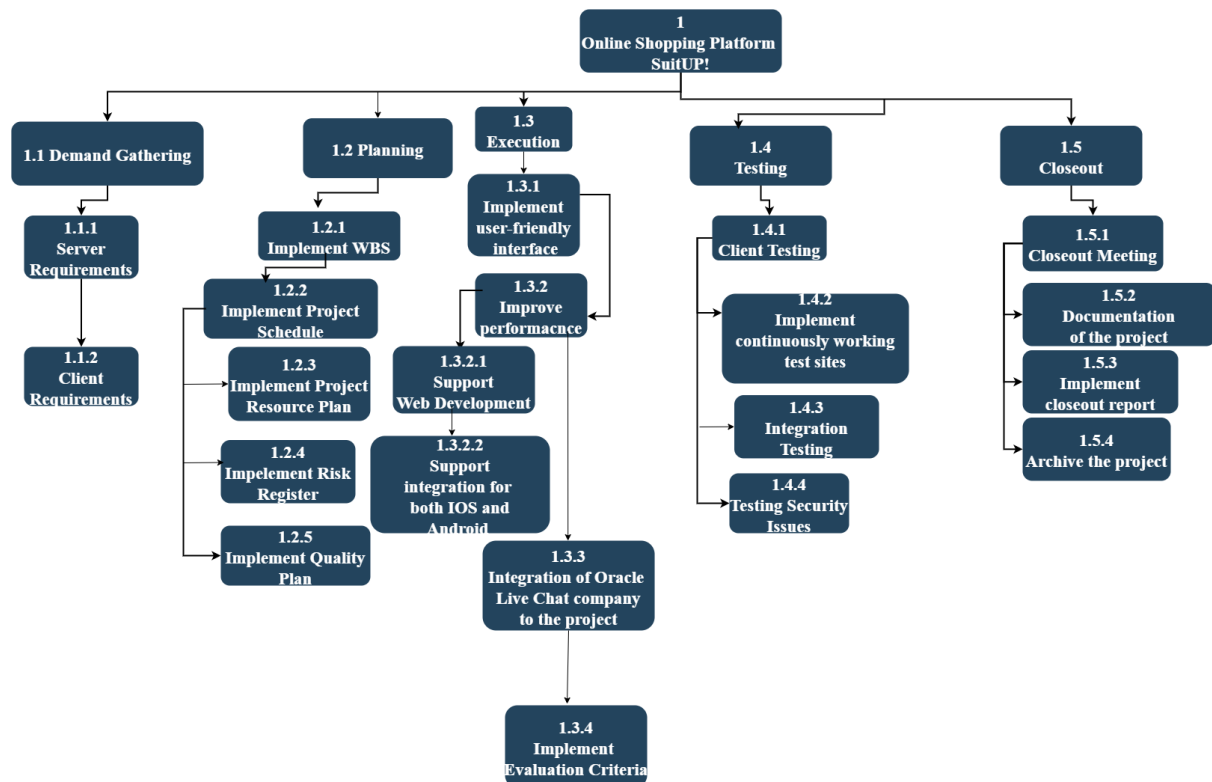
➤Summary:

Shopping is an activity everyone practices to meet their clothing needs. People who are keen on fashion or fashion bloggers do it even more often and influence the young generation to do so. Instead of doing long-term shopping in shopping centers and going to stores frequently, online shopping allows us to benefit time. It is obvious that people need a platform that will make them feel like a real store without leaving their homes. Especially during times of a global pandemic, being able to shop smart and from home has become a necessity.

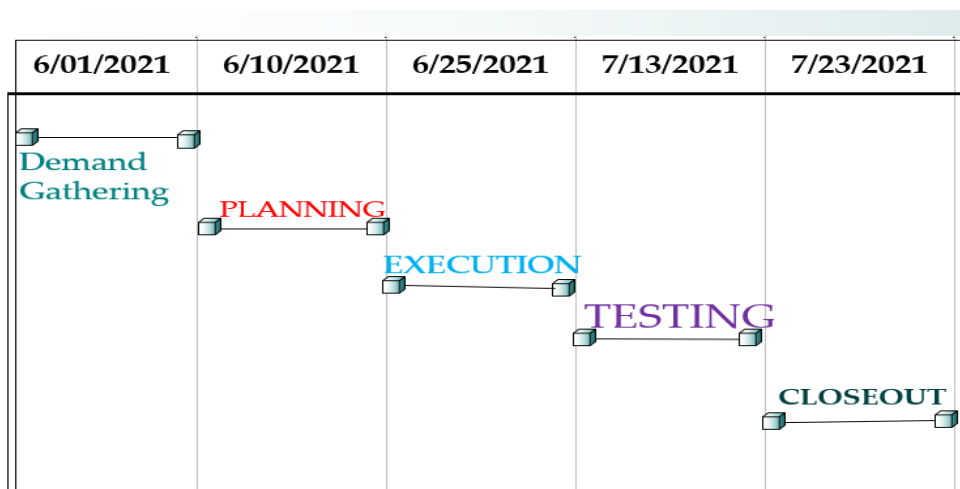
➤Project Methodology:

The project management approach we are using is **Agile**. Not only does Agile provide faster software development life cycle, but it is also customer focused. Customer satisfaction is our main goal, and in our case especially, their feedback is important. Considering the customers care deeply about clothes and choosing the outfits that suit them best without having to return or being disappointed later, we believe they would be willing to rate and send their comments. This will help with the improvement of the app. Agile also provides flexible change acceptance. It allows requirement changes at any time, while Waterfall avoids scope changes once the project starts. This is very important for our project.

➤ Work Breakdown Structure (WBS):



➤ Project Schedule:

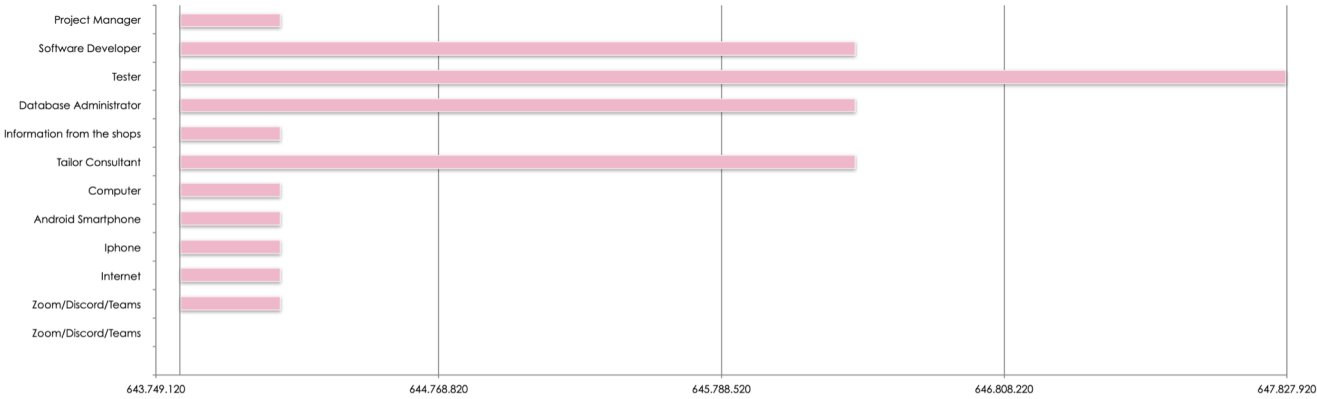


Important Note: You can find Gantt Chart as a separate file among the submitted files.

➤Project resource plan:

Project Resource Plan

RESOURCE	Amount	STATUS	START DATE	END DATE	Phases
Project Manager	1	Complete	06/01	07/23	All Phases
Software Developer	3	Completed	06/25	07/23	All Phases
Tester	2	Completed	07/13	07/23	Testing
Database Administrator	2	Completed	06/25	07/13	Execution
Information from the shops	Depends on how many shops	Incomplete	06/01	07/23	All Phases
Tailor Consultant	1	Incomplete	06/25	07/13	Execution
Computer	1	Completed	06/01	07/23	All Phases
Android Smartphone	1	Completed	06/01	07/23	All Phases
Iphone	1	Completed	06/01	07/23	All Phases
Internet	1	Completed	06/01	07/23	All Phases
Zoom/Discord/Teams	1	Completed	06/01	07/23	All Phases



➤ Risks and Management:

Risk Register

1. Organizational or External Risks

Risk Description	Likelihood of the risk occurring	Impact if the risk occurs	Owner	Mitigating action	Contingent action
Insufficient budget.	Medium	High	Financial Manager	Wise use of the project budget. Reporting of costs.	To ask for help to the sponsors.
Personal situations may occur.	Low	High	Leaders of the team	Requesting information from team members regularly	Recruiting a new candidate.
The budget for the project can be restricted because of external risks	Low	High	Financial Manager	Agreements with the sponsors about the budget's longevity.	Convincing the executive management team to prioritize this plan.
The live chat section of the app may not work efficiently.	Medium	High	Developing Team	Signing a contract with the best company that provides live chat.	To ask for help to the <u>relevant</u> company.
Contractor delays	Medium	High	Project Manager	Build in and protect lead time in the schedule. Communicate schedule early. Check in with suppliers regularly. Query '90% done'.	Escalate to Project Sponsor and Contracts Manager.

2. Technical Risks

Risk Description	Likelihood of the risk occurring	Impact if the risk occurs	Owner	Mitigating action	Contingent action
Some features of the app do not fit different phone models	High	Medium	Front end Developing Team	Regularly checking the documentation of the <u>front end</u> developers.	Determine bugs and writing new code scripts that will fit with different phone models.
Instead of being user friendly, the interface can become complex.	Low	Medium	Front end Developing Team	Continuous interaction with the front end and tester teams.	Highly experienced developers in implementing useful designs should be consulted.
<u>Cyber attacks</u> on the application can be arranged by hackers	Medium	High	Security team	By training cyber security staff and ensuring endpoint protection regularly.	The cyber security police have been notified as it should be. Assessing the extent of the project's loss.
The live chat software cannot be embedded into the mobile app	Medium	Medium	Support team. Developing team.	Questioning to the live chat company about the problem.	Determining the issues and try to fix them.

3. Project Management Risks

Risk Description	Likelihood of the risk occurring	Impact if the risk occurs	Owner	Mitigating action	Contingent action
The project cannot be completed in a systematic manner.	High	High	Leaders of Teams of the project and Project Manager	Regularly updates from the project teams. Issuing the necessary alerts to finish the task on time.	To encourage workers to complete their jobs without any delay.
Project purpose and need is not well-defined	Medium	High	Project Sponsor and Project Manager	Complete a business case and ensure purpose is well defined on Project Charter and PID.	Escalate to the Project Board with an assessment of the risk of runaway costs/never-ending project
Project schedule is not clearly defined	Low	Medium	Project Manager	Hold scheduling workshops with the project team so they understand the plan.	Escalate to the Project Sponsor and bring in back up resources.
No control over staff priorities	Medium	Medium	Project Manager and Team Leaders	The Project Sponsor will brief team managers on the importance of the project. Soft book resources. Communicate final booking dates after the scheduling workshops. Identify backups for each human resource.	Escalate to the Project Sponsor and bring in back up resources.

➤ Quality Plan:

▲ *Quality Metrics:*

1. Feedback from clients of the app in terms of usability and security response (pentest, nessus scan)
2. Continuous progress during the project's life cycle
3. Delivery Date - The time period which the app took to hand over from the concept of business to market

4. The number of products that have been bought by the users of the platform.

5. The number of products that have been delivered to users in the best way.

6. Software Quality Metrics:

Software Defect Rate (SDR) calculated per Six Sigma: Number of bug reports per every 1000 line of code

Function tests: $SDR = 5.0 - 8.0$

– System verification: $SDR = 1.0 - 2.0$

$\% \text{ Executed} = \text{Number of Testcases Executed} / \text{Total Number of Testcases}$

Defect Rejection Ratio

▲ ***Quality Planning Techniques :***

In this project “Benchmarking” will be used as a quality planning technique. According to this technique:

1. Procedures of low efficiency will be identified.

2. Expectations for performance will be created.

3. Both internal and external sources will be identified

4. Data will be summed up from these sources

5. These data will be analyzed carefully by the key team members

6. The particular report will be created by using quality management methods such as histogram, quality circle, control charts and six sigma, etc.

7. Steps will be taken as a result of this important report

To measure software quality, download size and security response will be considered. Additionally, thoughts of team members who are active during the project implementation are crucial in order to make quick choices.

▲ ***Period of Quality Measurement during Project Lifetime:***

1. Quality measurement will be done each week properly in order to observe development of the project and team work.
2. For every new component quality measurement techniques will apply
3. The measurement control periods may change according to the requests of the stakeholders

▲ ***Project Standards:***

1. Profitability and continuous utilization of the mobile app, which shows the high quality development of the project. In project management, it is called **Maturity**.
2. Making a number of sources available for the project which is called as **Source Utilization**.
3. At least half of the number of current successful test cases targets must be achieved.
4. Modules that pass the test cases with success must be accrue to the report.
5. The design should not be complex, clients can easily learn interface of the mobile application
6. It should be easy and flexible to use the app with high quality which is called **Modifiability** in project management.
7. The download size of the application should not be more than 100MB and since it takes up very little memory space, it can be easily downloaded to various phone models.

➤ **Defect Management:**

In the first stage of the defect management, bugs are detected by developers in the testing stage of WBS (1.4). At the same time selected users can report on the bugs they found. In the second stage, a defect report involving all bugs is prepared and prioritized based on periodic triage meetings and priority criterias. In the third step, a schedule is created to fix all bugs. Moreover, while the development team is fixing the defects, the test manager tracks the process of fixing defects compared to the schedule. When defects are fixed, resolution is reported and the testing team verifies that the defects are actually resolved in the final step. Once a defect has been resolved and verified, the defect status is changed as closed.

➤ **Conclusion:**

To sum up, people can shop anywhere, whenever they want, in a pleasant and comfortable way with this large store on their phones and computers. The project, which can work on all devices, has been successfully presented to the use of people in different countries in different languages.