

Project Management Report

Estimation

We have used Use cases estimation, Function point and Cocomo estimation based on the requirements from stakeholders meetings.

Use cases estimation

Initially using the use cases identified, we have estimated the effort. The effort required to complete the project exceeded the available effort. As the effort required exceeded the effort available, we planned to negotiate the scope of the project with the customer. We planned to talk with the customer and cut down certain features in the project. But use case estimation technique didn't capture the estimation at the feature level. We were not able to estimate the effort that would be required if we remove certain features from an use case. We felt our estimation technique might be give us an accurate estimate of the effort required.

For detailed use case estimation refer to the following link:

https://1drv.ms/x/s!ApK-ULn_Z18FgRpAcp35pJFR3UTM

Function points estimation:

We have estimated the effort of number of hours based on the features. In terms of features we were able to easily communicate with the stakeholder and negotiate the scope.

For detailed estimation refer to the following link:

https://1drv.ms/x/s!ApK-ULn_Z18FgSg_r2BpAH8cV9j1

Cocomo estimation

The problem with function point estimate was it didn't consider the integration effort. Hence we used COCOMO-II which uses features and considers integration effort too.

For detailed estimation refer to the following link:

https://1drv.ms/x/s!ApK-ULn_Z18FgSg_r2BpAH8cV9j1

Scheduling

- We are a new team with not much of prior software development experience. We have computed the total number of weeks available and based on that the total effort that we can spend as a team. We have 16 iterations of time where an iteration spans for 2 weeks. We have estimated the effort required based on the above mentioned estimation techniques and negotiated the scope of our project.

- We have allocated five iterations for inception phase. As our team has less development experience, there is a high risk that we don't follow appropriate process, planning, estimation and tracking techniques. There is also a high risk of not understanding the business context or goals, key drivers, business and technical constraints, not capturing all the requirements or capturing irrelevant requirements. In order to avoid all these risks we have given sufficient time in the inception phase.
- We used Cocomo-2 for estimating the effort required for architecting, constructing and testing the system. Cocomo-2 provides a formula where in we can compute the estimate. Based on the estimate, we have distributed our time and it has been incorporated in our macro plan.
- Our subsystem has to be integrated with subsystem that would be developed by team4. There might be many unforeseen issue in integrating both the systems. In order to mitigate these risks we have given enough time to sort out issue that would arise during integration.
- Based on the number of resources, technical proficiency of the team members in the chosen technology, we have estimate the time it would take to develop architecture and code the system.

Macro Plan

We have come up with the macro plan which depicts various milestones with dates, the risks that would be mitigated in the system and the artifacts that would be delivered to the stakeholders and mentors. Initially we decided on the number of cycles/iterations for each milestone based on our intuition. Later we used COCOMO-2 schedule equation to split the number of iterations or cycles. Please refer below link

https://1drv.ms/x/s!ApK-ULn_Z18FgRUwoFESwTdOoxcO

Tracking mechanism

- We are tracking the project to understand how close is the actual time it took for the team member to complete the tasks assigned to them with respect to the planned time.
- We are using Earned value to track the value that we are providing to our customer. Our iteration spans for 2 weeks and we track the value that we provide to our customer at the end of iteration. We planned to provide complete value to the customer over the span of 16 iterations. Every iteration/cycle has the same number of hours available and we intend to provide equal value in the iteration/cycle to our customer.

- We are also tracking the productivity of the team members based on the earned value they are providing. Currently we are not using this mechanism but we plan to incorporate it. We use this to reflect and improve ourself and not to pinpoint at members for the value they are providing.

For more details refer to the following link:

https://1drv.ms/x/s!ApK-ULn_Z18FgRpAcp35pJFR3UTM

Risk management plan

- We have identified all the risks pertaining to our system. We plan to mitigate the risk based on its priority and dependency with respect to other risks. Each iteration our objective is to decrease the risks in the system. By reducing the risks in the system we intend to provide value to the customer. Risk management involves the following:
 - **Identification**- Risks pertaining to the system are identified based on the stakeholder interactions.
 - **Prioritize**- We have prioritized the risks based on impact to the project.
 - **Plan**- Based on their priority we have come up with the risk plan.
 - **Mitigate**- In the plan we also we have identified the activity that is used to mitigate the risk.
 - **Monitor**- We monitor the status of the risks at the end of each cycle/iteration.
 - **Communicate**- Communicate the risk status to the stakeholders after each cycle/iteration.

Link for Risk Management plan: https://1drv.ms/x/s!ApK-ULn_Z18FgRztQVySE9a9koS6