ISTANBUL TECHNICAL UNIVERSITY

Project Management in Engineering

Homework - 4

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PROJECT PROPOSAL

Project Name: Consulting Platform Establishment

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Introduction:

With the development of technology, people became easily accessible to information. However, in some cases, people need someone who experience the situation instead of ready-information. However, reaching these experienced people is often difficult and expensive. There is no such platform that brings together experienced people and people who need counseling from them. This project is designed to meet this need.

Background:

Counseling is one of the reality that have been found naturally in human life. Throughout the years, people try to find out people where they can share their problems comfortably.[1] A famous phrase *'a problem shared is a problem halved'* shows the fact that when things get hard or a decision should be made quickly, people need someone to listen and 'hear their story' so they can get a better idea of their options.

Summary:

This project will be carried out for the establishment of a platform to bring together people who are looking for solutions. In this platform, people can give paid consultancy on the subject they are experts or receive paid consultancy on any subject. It will be a marketplace for experts and people who are looking for a solution on any topics will be able to make an appointment for a certain period of time from specialists and then they will be able to make video calls.

This platform will use its own video call solution. The project will be designed in a responsive way to run smoothly on different devices. Due to the flexible design of the project, some features will be added later on. These features may be about to make interactive conversation between the counselee and the expert. In this way, the conversation will be made more efficient and effective in the course of time.

Goals:

Project's goals are to establish platform that provide an effective video call communication between consultant and counselee by provide maximum contribution to counselee who is seeking solutions or advices.
Besides, by removing the working necessity in the office environment, counselling can be done at any time from anywhere as another goal of this project.

Methods:

Methods will be followed in this project can be separated into two approaches: project management and technical.

- **Project Management Approach**

The team of this project are open to new ideas that everyone on the team can add to the project. During the project, changes can be made in the plan to make a brainstorm and reduce the costs of the project or to complete it more quickly. Also, changes can be made during the project according to the feedbacks and requests of the customers. This will help to keep quality high as much as possible. Therefore, the Agile approach will be used.

Sprints will be 2 weeks periods in which the team focuses on a small set of work items, and aims to complete these small set of work items. Agile approach gives the advantage of breaking the project down and planning in small iterations, to deliver reliable and adaptable to all other changes every time.
It is more effective for them to participate in planning and estimation, as the core concept of agile approach has provided the team rather than "ordering" them by management.

- **Technical Approach**

The design part of the project will be done by using Figma and Adobe XD which are the most preferable applications by the UX and UI designers in the last three years.[2] Besides being new technologies, they bring unique features to designing part.

In the development part of the project, the following three will be used in the development of the front-end, back-end and payment system respectively:

- React will be used as a front-end solution.
- Python django framework will be used as a back-end solution.
- Stripe will be used as the payment system.

Schedule:

The project has planned to divide into five sections. The project scheduling is explained in detail these five sections.

- **Project Work Breakdown Structure**

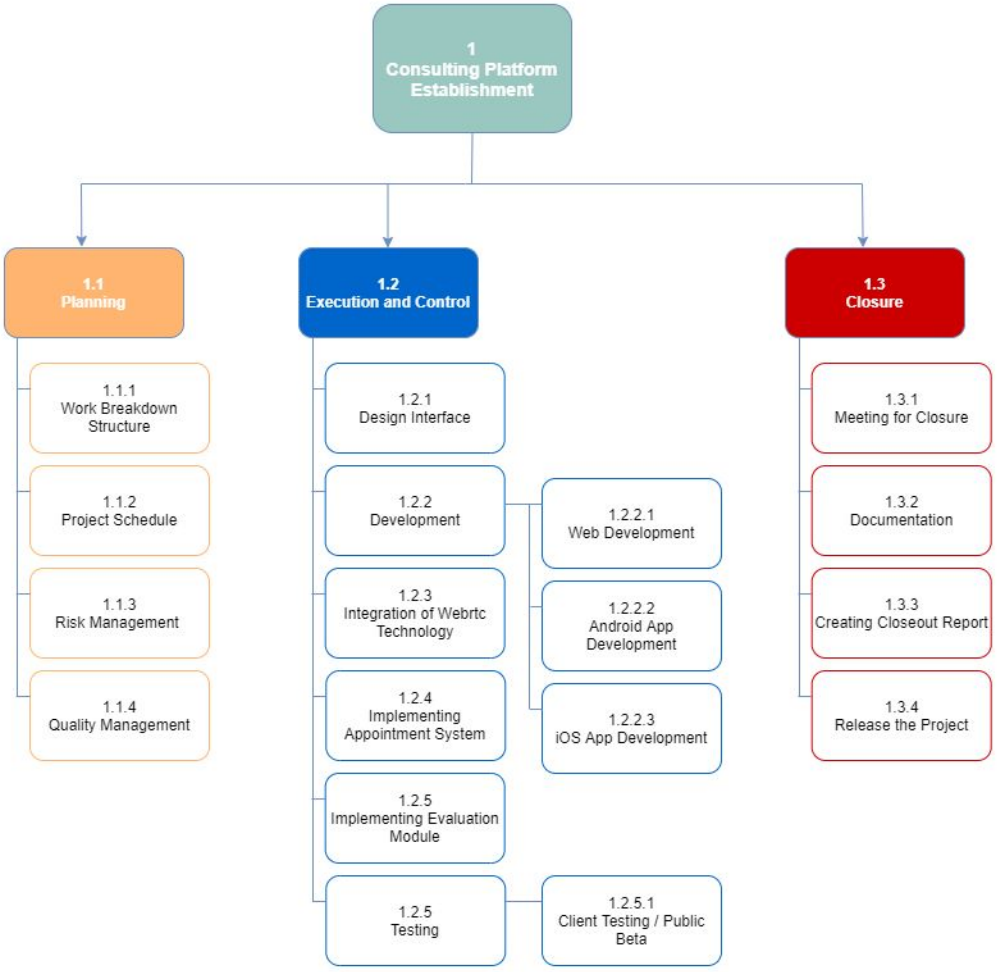

Figure 1: The Work Breakdown Structure of Project

- **Project Schedule**

The project schedule is given in Figure 2 below, along with the start and end dates of the iterations and all milestones. Demos for each product are the most critical piece in the sales process of the project. It's a unique opportunity to demonstrate the value of the project to a potential customer.

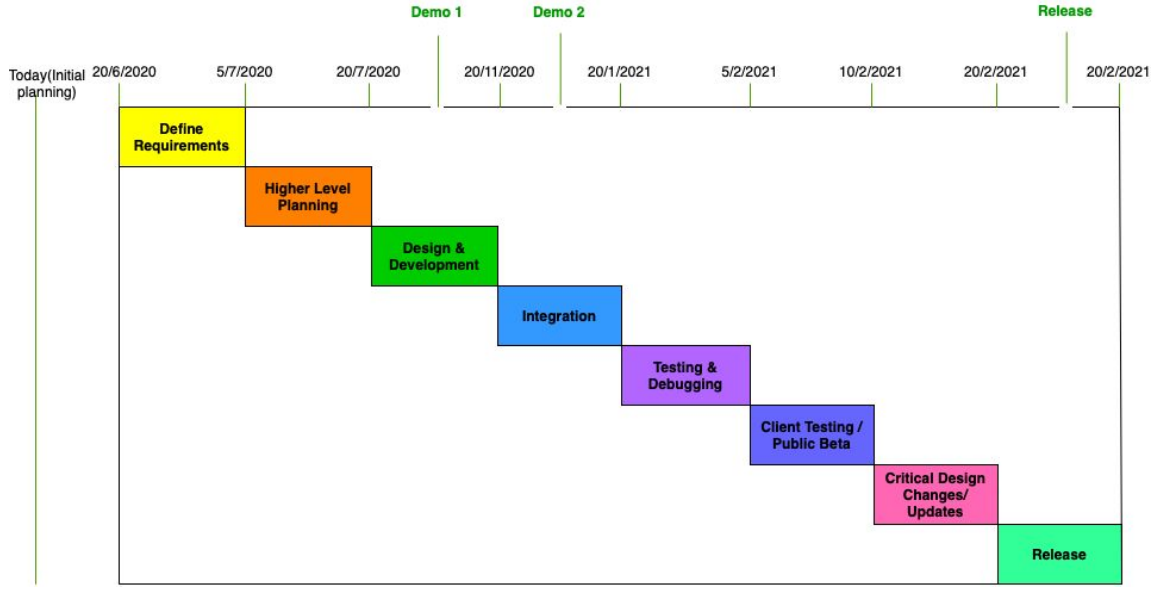

Figure 2: The Schedule of Project

- **Project Resource Plan**

Tasks are identified before the project resource plan was created. Furthermore, all these tasks are assigned to the phases of the project. In addition, the efforts for these tasks and who is responsible are stated. Project resource plan is given in Table 1 in detail.

Project Resource Plan			
Project Phase	**Task**	**Effort(Days)**	**Resource Type**
All Phases	Project Management	240	Project Manager
Requirements/ Analysis	Functional requirements for admin module Functional requirements for video conversation module Functional requirements for appointment module	15	IT Analysist
Development/ Design	User Interface Design Admin Panel Design	120	UX/UI Designer
Development/ Design	Frontend Coding of design	200	Frontend Developer
Development/ Design	Implementation of Video Conversation Module Backend coding all platform	200	Backend Developer
Testing	Create Test Plan, Test Data, Test Cases And Testing	15	QA Analysis

Table 1: The Resource Plan of Project

- **Risk Register:**

In the risk register, five potential risks of the project is given in the Table 2.

Description	Impact	Possibility of Occurrence	Action Owners	Mitigation Action	Contingent Action
The resources required for the project have not been adequately identified.	High	Medium	Field researcher	To learn the resources used in similar projects and to compare them with alternatives, to search for new resources that are needed.	Getting support and research from experienced people in a similar project.
The project cannot be carried out in a disciplined way.	High	High	Team leaders	Continuously requesting reports from the team members, giving the necessary warnings in order to complete the work on time.	To warn employees to finish their work on time and to reward those who finish on time.
Defects in design and some features not working properly for devices of different sizes	Medium	High	Front-end developers and testers	Using ui kits with responsive items, making sure that there are no major problems with different devices with the changes made	Fixing css, sass files that caused defects in design via debugging.
The necessary equipment and other resources to support the project may not be provided on time.	Medium	High	Supply chain manager	To clarify the issue of time with the provider and record the independent works that can be done with the available resources against the situation that delay occurs.	To warn provider of equipment and resources. Reporting situation to project manager to lead execution of other tasks.
Video call service provided by another company is not working efficiently.	High	Medium	Purchasing manager and Developers	Choosing the best provider as a result of searching and comparing video call service alternatives and testing them before purchasing.	Understanding why it doesn't work well via testing. If the reason for this is not either adequacy of the server or the bug on the code, asking help from the help desk of the provider company.

Table 2: The Risk Register of Project

- **Quality Plan**

In the quality planning; metrics, planning techniques, the measurement frequency of the quality, and standards used are determined. Decisions on these issues are given in the following subsections.

❑ Quality Metrics

1. The number of stories we have committed to which meets ‘doneness’ criteria.
2. The number of stories have been delivered with high quality to the end user.
3. The amount of time it took to deliver from business concept to production. (Date of delivery)
4. Minimum production incidents and prevention recurrence of same incident in subsequent releases.
5. Ensuring continuity in development at all life cycles of the project.
6. End user feedback in terms of simplicity, stability, usability.

❑ Quality Planning Technique

In this project `benchmarking` will be used as a planning technique. With this technique:

- Low performance processes and techniques will be determined.
- Performance expectations will be determined.
- The internal and external sources that exhibit this performance will be detected.
- Necessary datas will be collected from these sources.
- These collected datas will be analysed.
- Everything collected will be compared with previous projects and studies and projects of competitors.
- A detailed report will be created. Quality control tools such as **inspection**, **control charts**, **trend analysis** etc. will be used to prepare this report.
- According to this report, action will be taken.
  Brainstorming may additionally be used to analyze and make fast decisions after a risky change occurs.

❑ Measurement Frequency Of The Quality Throughout Project Life

- After creating prototypes of new pages and components, quality measurement techniques will be done for each. **(Per new page and new component)**
- Quality measurement will be done **every 2 weeks** to monitor the progress and management of the project.

- With the **completion of all prototypes**, a quality measurement will be made again.
  - ❑ **Standards Used In Order To Keep Them Scientific And Measurable**

- The amounts and types of resources must be used reasonably. **(Resource Utilization)**
- Software must be stable for daily use of users. **(Maturity)**
- Tests carried out during development must get a grade of at least 7 out of 10 from the test staff.
- The interface and components must not be difficult or complex to learn, and the **learnability** and **operability** should be higher than 0.8 (over 1) in the end user's feedback.
- Pages and components that pass the test successfully must be added to the documentation within a week.
- The application should be easy to modify without harming present product quality.**(Modifiability)**

Defect Management Throughout Product Life Cycle:

The tests will be runned after completing each module. Performance tests, error tests will be carried out in detail on different devices. Thus, we will try to reduce the likelihood of an error as much as possible.

The first step in defect management is to find the defect. When the defect is found, the priority of the defect will be determined. It will be reported to the team. After accepting or rejecting bug by developer, bugs will be reproduced. If the bug still exists, the cycle will start again. If the bug does not exists, the problem has been successfully resolved. This cycle is modeled in Figure 3.

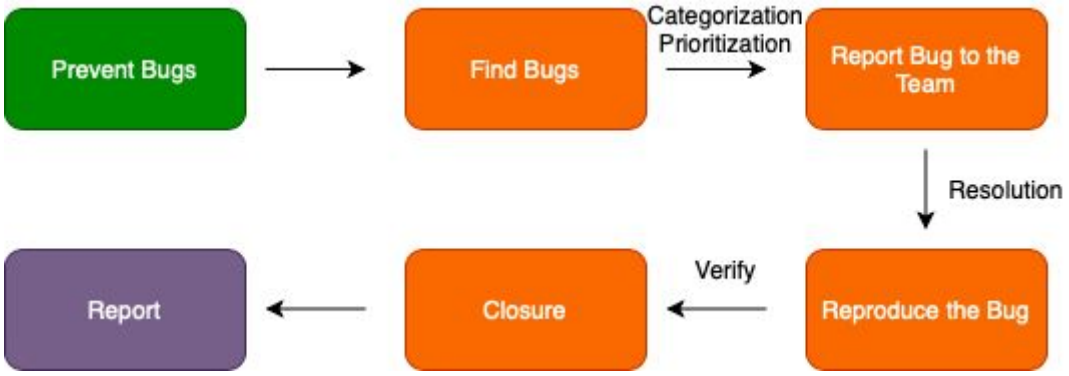

Figure 3: Defect Management Throughout Life Cycle

Conclusion:

As a result, in this project by establishing a consulting platform, consultants and counselee are being made closer to each other. The project, which has been prepared in accordance with the work on all devices, has offered a platform that can provide consultancy in different areas of expertise in different countries.

References

[1]https://counsellingtutor.com/history-of-counselling/

[2]https://www.smashingmagazine.com/2019/04/sketch-figma-adobe-xd-ui-design-applications/

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