SachinParajuliProposal.docx

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Submission date: 06-Jan-2025 11:32PM (UTC+0545)
Submission ID: 2560315947
File name: SachinParajuliProposal.docx (339.85K)
Word count: 727
Character count: 4023

Specification Document

Of

Final Production Project

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BECKETT
UNIVERSITY

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B.Sc(Hons) Computing

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1. PROJECT AIM

The aim of this project is to develop a user-friendly mobile application that bridges the gap between students and teachers, having features like providing assignments and other school activities.

2. PROJECT OBJECTIVES

- To design and implement a secure login system for students and teachers.
- To enable students to access recorded sessions and manage assignments within the app.
- To allow teachers to upload materials and track student activities efficiently.
- To ensure scalability and performance while using the app.
- To design robusting user interface.

3. PROJECT SPECIFICATION

Table 1 Functional requirement

FUNCTIONAL REQUIREMENTS	MoSCoW
A secure login system for students and teachers with role-based access.	M
The ability for teachers to upload recorded sessions and materials.	M

Teachers can assign tasks and track student submissions.	M
Notifications for new assignments or updates from teachers.	S
A search functionality for assignments and recorded sessions.	S
Admin panel for admin to manage staff and students.	M

Table 2 Non-functional requirement

NON - FUNCTIONAL REQUIREMENTS	MoSCoW
The app must handle up to 10 concurrent users without any performance issues.	M
All user data must be encrypted.	M
The codebase should be clean and modular to allow easy future updates.	S

4. INITIAL PLANNING AND METHODOLOGY

For this project, the Rapid Application Development (RAD) technique was chosen because of its primary focus on user feedback, iterative development, and quick prototyping (Davines, et al., 2017). Projects with specific goals, constrained schedules, and a requirement for flexibility are best suited for RAD. There will be four main stages in the project's lifecycle:

4.1 Requirements Planning

- This stage involves defining the project's goals and getting feedback from possible users, including staffs and students.

- This process guarantees that the app's features (such as login, recorded sessions, and assignment tracking) satisfy user requirements and complement its educational objectives.
- Key deliverables include:
    - Documented user requirements.
    - Diagrams.

4.2 User Design

- Creating the app's interface using wireframes and mockups for key elements like the dashboards, assignment upload capabilities, and login screen is the main goal of the user design phase.
- Tools like Figma will be used to create interactive prototypes that will replicate app functionality and collect user input in advance (Calonaci, 2021).
- Because RAD is iterative, changes can be made at this stage in response to feedback.

4.3 Construction

- In this stage, the functions of the app are really developed. The development process will be incremental:
    - Implement login functionality with secure authentication.
    - Develop APIs for recorded sessions.
    - Build assignment submission and tracking modules.
- Every update will be tested to find and fix any bugs or usability problems.

4.4 Cutover

- The cutover phase involves finalizing the app and deploying it to end-users. This includes:
    - Conducting testing to gather real-world feedback.
    - Preparing documentation.

5. PROJECT TIMELINE

The following image defines when the project gets started and ends.

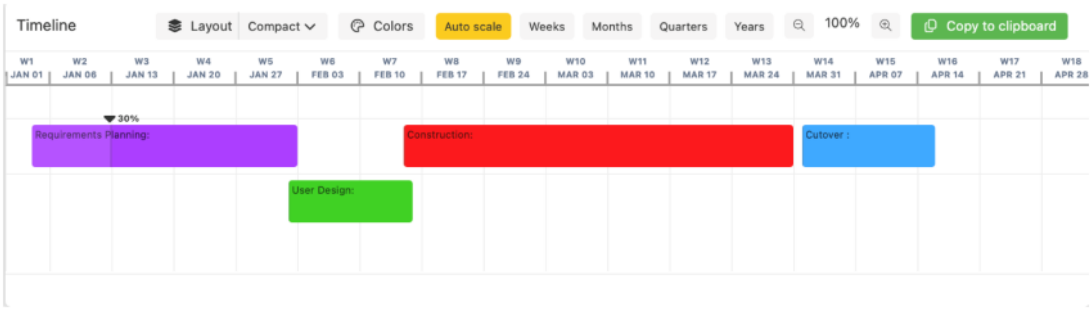

Figure 1 project timeline

6. GANTT CHART

The following Gantt chart in the picture shows that I have followed RAD methodology which includes Requirement planning, User Design, Construction, and lastly Cutover (Joana Geraldi, 2012).

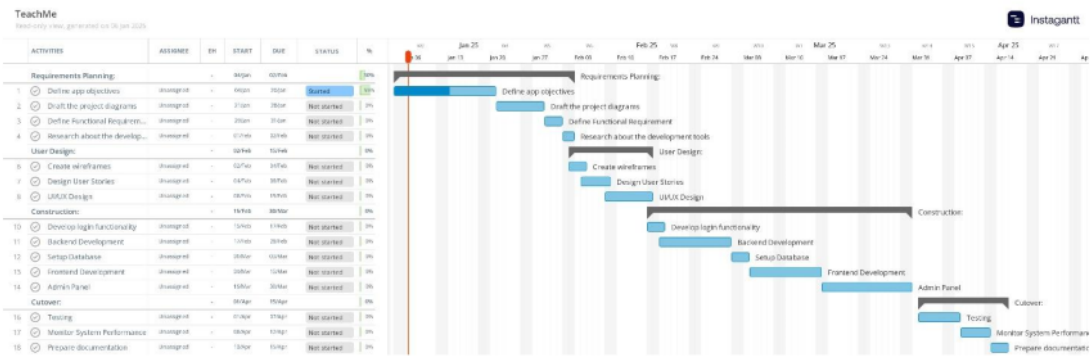

Figure 2 Gantt chart

7. RESOURCES

The basic requirements to complete this project are as follows:

7.1 List of Software

- IDE: Visual Studio Code
- MongoDB
- React Native
- Express
- Node.js
- GitHub

7.2 List of Hardware

- Macbook Pro M3 Pro
- WorldLink Network

Bibliography

Calonaci, D., 2021. What is figma. *Designing User Interfaces,* pp. 1-87.

Davines, P. B., Carne, C., Mackay, H. & Tudhope, D., 2017. Rapid application development (RAD): an empirical review. *European Journal of Information Systems ,* p. Volume 8.

Joana Geraldi, T. L., 2012. Gantt charts revisited: A critical analysis of its roots and implications to the management of projects today. *International Journal of Managing Projects in Business*, 7 September, pp. 1753-8378.

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