

Sri Lanka Institute of Information Technology



Research Project

Status document – 01

A Cloud-based Tangible Learning Solution for Early Childhood Development

Student Name – Ratnasuriya M.M.D

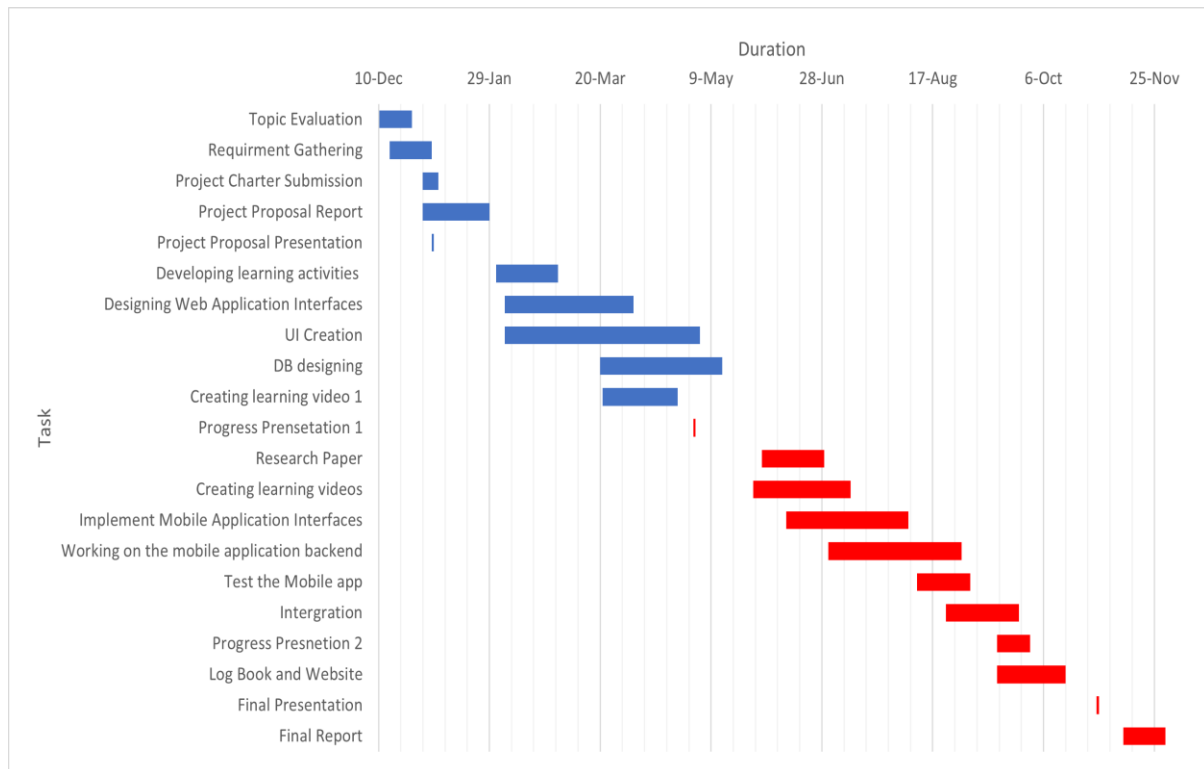
Student Number – IT19215716

Group ID – **2022-287**

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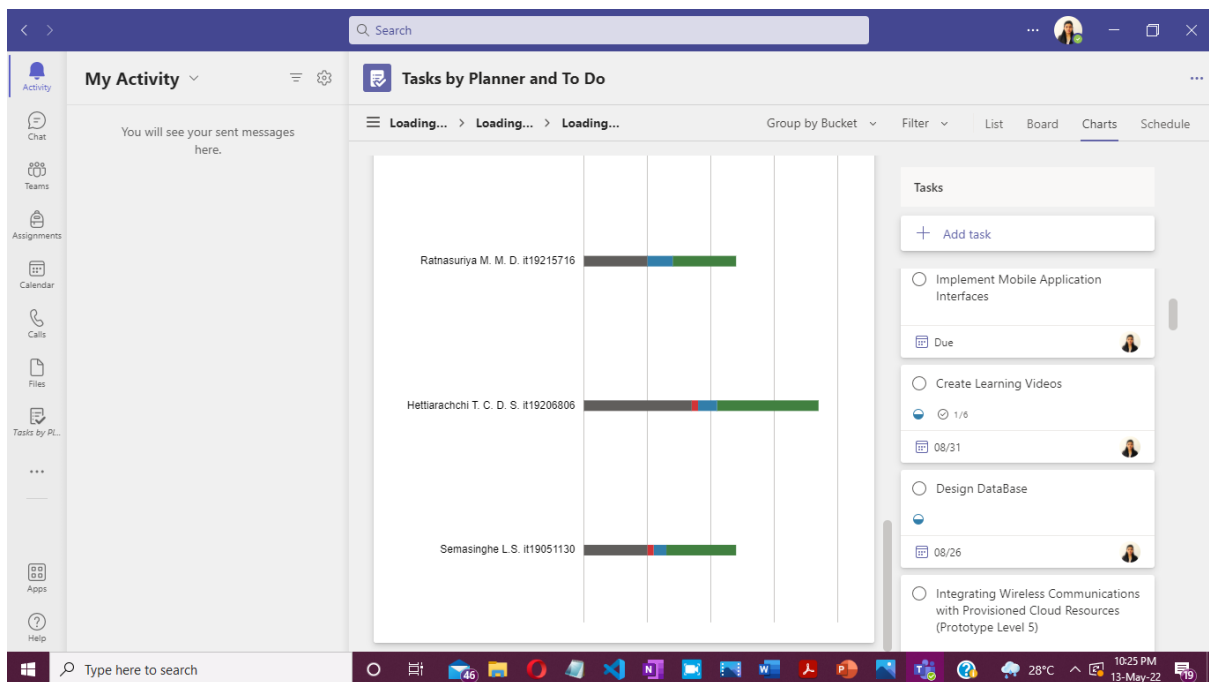
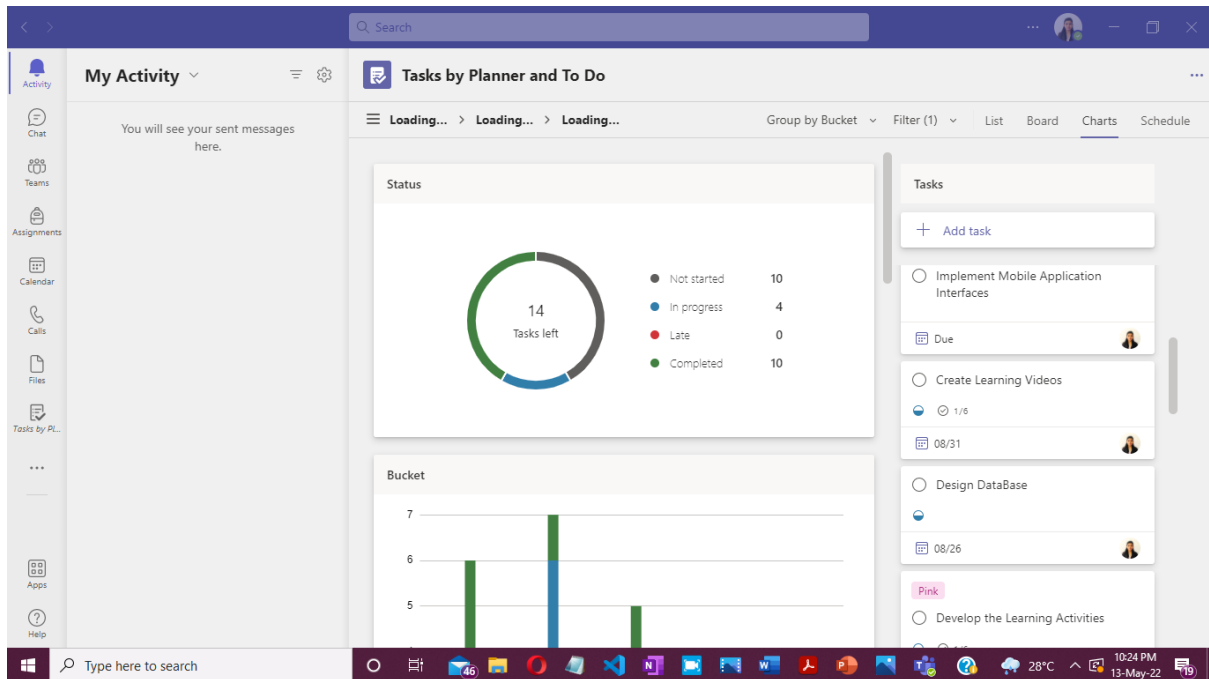
1. Gantt Chart



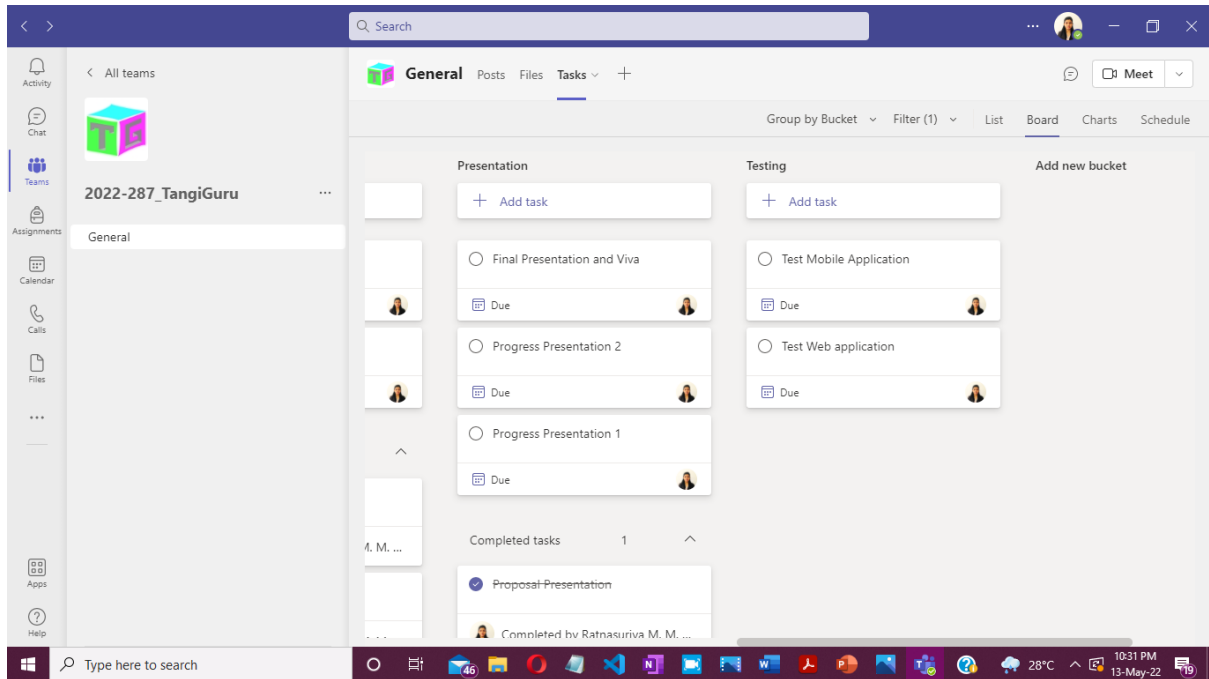
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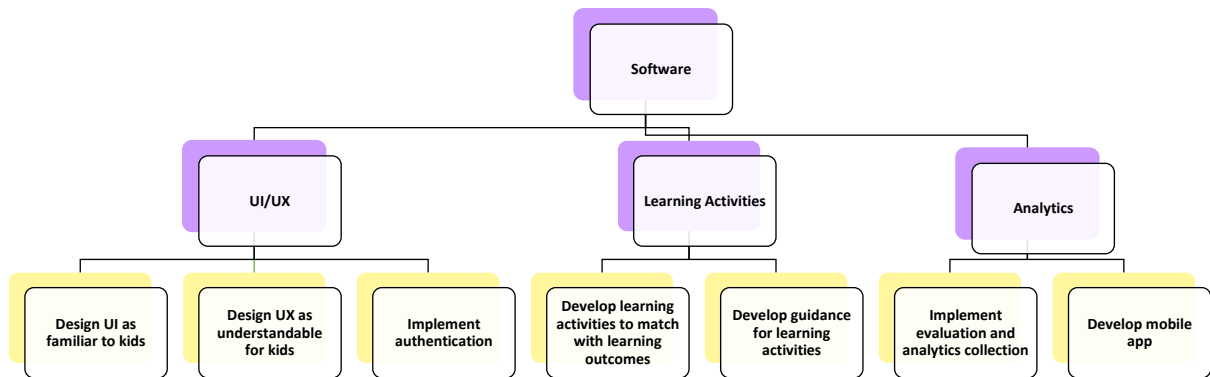
2. Project view MS Planner



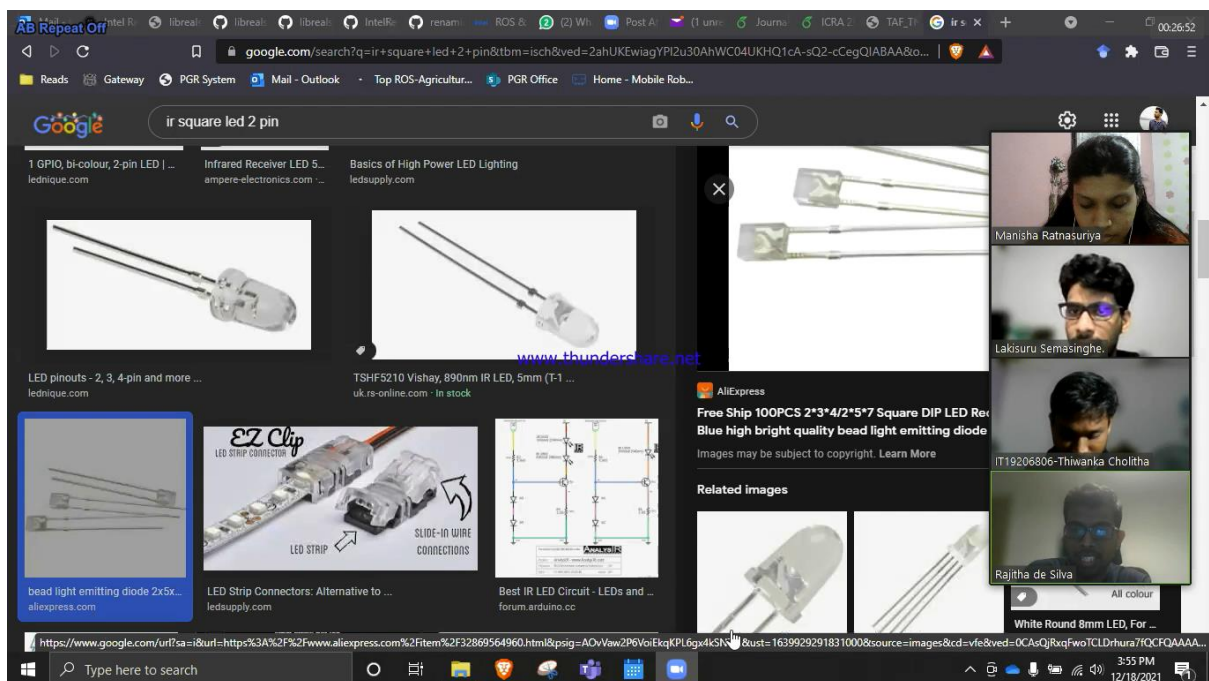
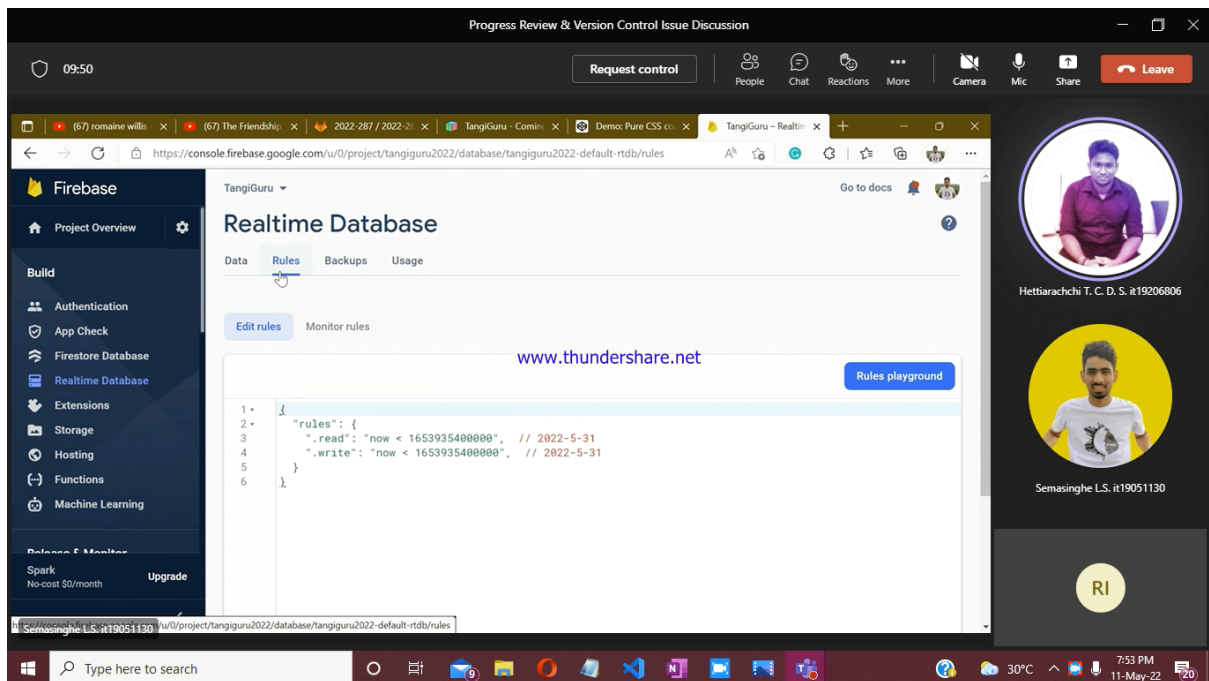
3. Work Breakdown Structure MS Planner



4. Work Breakdown Structure



5. MS Teams Chats and Calls



2 OBJECTIVES

2.1 Main Objective

To eliminate the problems stated above, an e-learning platform powered by Machine Learning and Artificial Intelligence is proposed, enabling personalized learning path creation for users and determining individual learning to be more resourceful and compelling. The ML-powered platform has the capability to find answers to users' subject-related problems/questions across the internet archives. This facility is a great help for users as this process serves valuable time of the user by bringing answers and references to a single place with more accurate information. If not satisfied, users are given the option to ask questions in the platform's thread section to get answers from the respective experts. The system will be intelligent to generate an optimal answer from up-voted answers to form a complete answer. Additionally, with the help of previously answered questions, platform offers a quiz option to either refresh or solidify users' knowledge on their subject of interest. Apart from the above features, a user can get support from an expert on their field through video conferencing as well. The platform has the ability to accurately measure users' proficiency by evaluating the users' contribution to other platforms using machine learning to rank them in the platform. This evaluation method is a great opportunity for the users as well because this process generates a valuable portfolio of the user which can be used to showcase their skills/talents to the outside world.

2.2 Specific objectives

In order to reach the main objective, specific objective mentioned below has to be fulfilled.

1) Detecting users' proficiency level along with an auto-generated portfolio

In this specific objective, we propose an approach that identifies developers' expertise according to their behaviors and activities on community questions answers platforms and social code management platforms. Advanced custom-made web crawler will be used to mine the developers' information. The proposed model will predict the developers' proficiency level (Novice, Intermediate, Professional, Expert) and generate a portfolio by filtering out unnecessary details from the gathered data.

