MOBILE APP PROJECT PROPOSAL FORM

Project Title:	**Rubik's Cube Solver**
Members:	Shin I. Lim
	Edgar P. Esguerra Jr., Siegfred Lorelle C. Mina, Kenji C. Ilao

PROJECT CONCEPT	
Overview:	This project aims to develop a Rubik's Cube Solver mobile application that will allow users to conveniently solve 2x2 Rubik's Cubes by assigning the colors for a 3D 2x2 cube rendered within the app. The application will analyze the cube's configuration, identify the optimal solution, and guide the user step-by-step towards solving the cube. By providing a user-friendly and efficient solving experience, the application aims to cater to both beginners and experienced Rubik's Cube enthusiasts specifically for 2x2 cubes.
Statement of the Problem:	Solving the Rubik's Cube can be a challenging task, requiring a deep understanding of the puzzle's algorithms and a significant amount of practice. Many users struggle with finding the optimal solution and following complex solving instructions. Additionally, carrying a physical guide or referring to online tutorials can be inconvenient. Therefore, there is a need for a mobile application that simplifies the solving process, offers clear instructions, and enhances the user experience, specifically for the 2x2 cube sizes.
Proposed Solution:	1. Develop a Rubik's Cube solver specifically for cube enthusiasts, learners, and speedcubers. 2. Show move notations, along with, visual cues, animations, and move highlighting to guide the cube learners through the solution for solving the cube. 3. The Rubik's Cube solving algorithm will be implemented with optimal step-by-step solutions. 4. Design an intuitive and visually appealing user interface to ensuring a smooth and enjoyable user experience.
Target Users	• Rubik's Cube Enthusiasts • Rubik's Cube Leaners • Speedcubers
Proposed Features	1.) Color Assignment: Let cubers manually assign the colors of a 3D rendered 2x2 in the app to represent their physical 2x2 cube. 2.) Solving Algorithm: An efficient Rubik's cube solving algorithm will be implemented to generate optimal step-by-step solutions based on the cube's configuration, specifically tailored for 2x2 cubes. 3.) Step-by-Step Guidance: The application will provide intuitive and clear instructions for each step of the solving process, specifically designed for 2x2 cubes. Move notations, visual cues, animations, and move highlighting will guide the user through the solution. 4.) User-Friendly Interface: The application will feature an intuitive and easy-to-use interface, ensuring a smooth and enjoyable user experience specific to 2x2 cube solving. 5.) Time Tracking: The application will include a timer to track the user's solving time specifically for 2x2 cubes, allowing them to challenge themselves and monitor their progress over time. 6.) Progress Tracking: Users will be able to save their solving history and track their improvements specifically for 2x2 cubes. This feature will motivate users to achieve faster solving times and measure their progress accurately.

	7.) Customizable Options: While the application primarily focuses on recommending the optimal solving method, it can offer customizable options for users who prefer specific methods or want to explore different techniques manually. Nice to Have Features: 1.) Cube Scanning: The application will utilize the device's camera and color detection algorithms to scan and analyze the 2x2 Rubik's Cubes' configurations accurately. 2.) 3x3 Cube: Add a 3x3 cube solver with the same functionality as the 2x2 cube solver.

APPROVAL	
Signature:	
Name of Faculty:	**Prof. Arlene B. Canlas**
Course:	Mobile Development
Date:	06-21-2023
Note: This part shall only be signed by the Faculty-in-Charge if there are no further revisions needed to be done for the proposal. Until such, the students should be advised on what to enhance/revised on their proposals and it should be logged on the revision sheet attached.	