Abstract:

**“UVU3100 Safe Banking System”**

The concept of “UVU3100 Safe Banking System” is a secure mobile banking application designed to protect user data, ensure safe authentication, and provide an easy-to-use experience. This project focuses on preventing key security risks, such as **insufficient data validation** and insufficient network, which are common in mobile banking.

The goal is to create a safe and efficient platform for financial transactions using strong encryption techniques and following industry security standards. Built for Android, the app will incorporate modern security frameworks to keep user transactions protected from potential cyber threats.

Milestone 1 Research and Design (Deadline 02-02-2025):

* Study common security issues in mobile banking.
* Review existing cryptographic algorithms like **AES**, **RSA**, and study security standards.
* Analyze potential threats, such as SQL injection and man-in the-middle attacks.
* Identify and framework such as **Android jetpack**, **Wireshark**, and **Firebase Authentication or ASW,** and require tools for this project.
* Document the design principles, potential threats, and countermeasures.
* Tasks prioritize with the timeline frame.

Milestone 2 Implementation (Deadline 02-23-2025):

* Coding in the android studio using Java language
* Identify and prioritize vulnerabilities
* Conduct initial testing for functionality and correctness.
* Deliverables: working app with basic security features.

Milestone 3 Code Security Analysis (Deadline 03-23-2025):

* Ensure all fixes maintain compatibility with app features
* Prioritizing vulnerabilities based on severity and potential impact.
* Conduct through security testing after fixing.
* Deliverables: code analysis report.

Milestone 4 Code Security Analysis (Deadline 03-23-2025):

* Develop and document a remediation plan for addressing identified vulnerabilities.
* Apply fixes to insecure code, ensuring compatibility with the overall system.
* Conduct thorough testing to validate the effectiveness of the fixes.
* Deliverables: A fully secure app with validation fixes.

Final Milestone 5: Documentation and Reporting (deadline: 04-23-2025)

* Documenting the timeline of the project through the process that includes design, implementation, security analysis, and remediation.
* Prepare a concise project report (5-6 pages) and a user guide for the application with navigation and troubleshooting.
* Deliverables: Complete the Android application app with secure code and deployed, Project report, user guide, and final project submission.