MULTIMEDIA UNIVERSITY | FACULTY OF COMPUTING & INFORMATICS

Final Year Project Proposal Form

Project Title	Multi-Feature Security for Passwords and Web Vulnerabilities
Supervisor Name	Dr. Aziah Binti Ali
Co-Supervisor Name (if any)	-
Project Status	Student-Proposed
Industry Collaboration	No
Company Name, Contact Name, Contact Phone (if the answer to Industry Collaboration is Yes)	-
Project Type	Application-Based / Research-Based / Application and Research Based
Project Specialization (Project Specialisation and Student Specialisation should match)	Cybersecurity
Project Category (Pls. refer at the end of document for the selection of category based on the specialisation)	Cryptography and Data Security

Project Focus/Contribution (Pls. refer at the end of document for the selection of focus/contribution based on the specialisation)	• Cryptography • Database Security • Malware Analysis
Project Description (Discuss Background, Problem Statement, Methodology, Expected Output/Significance in summary form)	**Background:** In today's digital era, cybersecurity has become a critical concern for both individuals and organizations. Despite the availability of various tools to protect online presence, many websites still remain vulnerable to security flaws such as insecure cookie settings, missing security headers, and weak password management. This poses a significant risk of data breaches, unauthorized access, and identity theft. As a result, users require a comprehensive solution that not only helps secure websites but also ensures safe and effective password management. **Problem Statement:** The lack of user-friendly, integrated solutions for website security and password management leaves many individuals and businesses vulnerable to cyberattacks. Traditional website scanners and password managers are often separate, requiring multiple tools and steps to protect online activities. There is a need for a single platform that can combine both website vulnerability scanning and secure password management, offering additional features such as two-factor authentication (2FA) and dynamic password generation with encryption to ensure the utmost security. **Methodology:** This project aims to develop a web application that serves as a multi-functional cybersecurity tool. The app will allow signed-in users to scan websites for vulnerabilities, providing them with comprehensive reports on detected issues like insecure cookies, misconfigured security headers, and other common web vulnerabilities. The app will also allow users to download these reports for further reference or action. In addition to website vulnerability scanning, the web app will include a password management system, enabling users to store, manage, and retrieve passwords securely. It will implement two-factor authentication (2FA) to enhance the security of user accounts and dynamic password generation, ensuring the creation of strong, unique passwords. These passwords will be encrypted

	using modern cryptographic techniques to provide secure storage, preventing unauthorized access to sensitive data. **Expected Output/Significance:** The expected outcome of this project is a fully functional web application that serves as an all-in-one cybersecurity tool for individual users and small organizations. The app will provide the following key features: • Website Vulnerability Scanner: Scans websites for common security vulnerabilities and generates downloadable reports. • Password Manager: Securely stores and manages passwords, incorporating strong encryption techniques. • Smart Password Generation: Dynamically generates strong, unique passwords and encrypts them for secure storage. This project is significant in that it addresses the pressing need for comprehensive cybersecurity tools that combine website scanning with password management and encryption, providing a unified, user-friendly solution for enhanced online security.

Project Objectives (Focused and precise list of statements that can imply the goals to be achieved, Majority of the Project Objectives – using SMART objectives)	1. Develop a Website Vulnerability Scanner 2. 3. 4. 5.

Project Outcomes (Outcomes are in line with the Project and Student specialisation)	
Project Scope (Focus/Expected Output/ Deliverables with the limits and constraints of the study can be described and implies enough scope for the two-trimester project)	

Number of Students (If it is two-students project, subtitles and work distribution must be clearly specified and differentiated for each student)	One/Two
Student 1 Subtitle (Pls. fill up if the number of students is two)	
Student 1 Work Distribution (Pls. fill up if the number of students is two)	
Student 2 Subtitle (Pls. fill up if the number of students is two)	
Student 2 Work Distribution (Pls. fill up if the number of students is two)	

Student 1 Details (Student Name, Student ID, Specialisation, Handphone number, E-mail address)	
Student 2 Details (if it is a two-student project) (Student Name, Student ID, Specialisation, Handphone Number, E-mail address)	

Select one Project Category based on Specialisation:

Software Engineering:

Critical System

Application Software

Software Tools & Utilities

Service Oriented Computing

Data Science:

Data Engineering

Data Analytics

Cybersecurity:

Cryptography and Data Security

Investigation and Analysis

Security and Defence

Game Development:

Game Software Development (GSD)

Game Algorithm Research (GAR)

Game Design Prototyping (GDP)

Information Systems:

IT Infrastructure

Transaction Processing Systems

Intelligent Systems

Select one Focus/Contribution based on Specialisation:

Software Engineering:

Product Development

Prototype/Proof of Concept

Software Engineering Methodologies

Others (Pls. specify)

Data Science:

Data Management

IoT

Optimisation of Technologies

Analysis of data (texts, videos, images, numerical digit)

Others (Pls. specify)

Cybersecurity:

Cryptography

Database Security

Blockchain

Malware analysis

Forensics

Ethical hacking

Network and Cloud Security

Others (Pls. specify)

Game Development:

Game Software Development (GSD): Development and implementation of a complete game from design, programming to production of a complete game installation package

Game Algorithm Research (GAR): Thorough investigation and analysis of specific algorithms used in games

Game Design Prototyping (GDP): Proof of concept of novel specific game design concepts or game mechanics via development of complete prototypes

Information Systems:

Data & Information Management

User Experience

System Analysis & Design

IS Project Management

Business Processes

Technology Evaluation

Others (Pls. specify)