Cybersecurity Capstone Project

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M1 Assess the selected idea in terms of system components, functionalities, and interfaces.

1. Identify System Components

- **Define Major Components**: Identify the main parts or modules of the system. These could be hardware components, software modules, databases, user interfaces, etc.
- **Describe Each Component**: Provide a detailed description of each component, including its purpose, the technology it might use, and its role within the system.
- **Diagram the System**: Create a visual representation (e.g., block diagram or architecture diagram) showing how these components are connected.

2. Outline System Functionalities

- **List Key Functionalities**: Identify and list the main functions the system must perform. For example, data processing, user authentication, or report generation.
- **Map Functionalities to Components**: Determine which system components are responsible for each functionality.

3. Evaluate Interfaces

- **User Interfaces (UI)**: Assess how users will interact with the system.
  This includes the design of screens, input forms, dashboards, etc.

- **System Interfaces**: Examine how different components of the system will interact with each other.
  For instance, API interactions, data exchange formats, or middleware.

- **External Interfaces**: Consider how the system will interact with external systems
  or third-party services (e.g., integrating with a payment gateway or social media).

D1 Evaluate alternative project ideas and assess their feasibility and suitability based on computing considerations.

It is a brainstorming ☺

- Gather a variety of project ideas relevant to your research area, consider different approaches or technologies that could solve the problem you're addressing.
- **Compare Alternative Ideas – Assess Feasibility, Assess Suitability and Risk Assessment**

Assess Feasibility

Technical Feasibility: Determine whether the required technology and expertise are available and if the team has the necessary skills.

Operational Feasibility: Evaluate the ability to implement and maintain the project within the organization or environment where it will be deployed.

Economic Feasibility: Assess whether the project is financially viable and if it can be completed within the available budget.

Legal and Ethical Feasibility: Ensure the project idea complies with legal requirements and adheres to ethical standards in computing.

Assess Suitability

Alignment with Objectives: Check how well each project idea meets the overall objectives of the initiative.

Target Audience Needs: Evaluate how well the project addresses the needs and preferences of the intended users.

Risk Assessment:

Evaluate the risks associated with each idea and how they might impact the project's success.

M2 Write and present a professional project proposal.

1. Title

- A clear, concise, and descriptive title that reflects the focus of the project.

2. Introduction

- **Background**: Provide context and background information relevant to the topic.
- **Problem Statement**: Clearly define the problem or challenge the project.
- **Significance**: Explain why the problem is important and worth solving.

3. Objectives

- **General Objective**: State the overall goal of the project.
- **Specific Objectives**: List the specific, measurable objectives that will help achieve the overall goal.

4. Methodology

- **Research Design**: Outline the approach or methodology to be used (e.g., experimental, qualitative, quantitative).
- **Data Collection**: Describe the data collection methods and tools to be used.
- **Analysis**: Explain how the data will be analyzed to meet the objectives.

5. Expected Outcomes

- **Results**: Discuss what you expect to achieve through this project.

6. Conclusion

- **Summary**: Summarize the key points and restate the importance of the project.

7. References

- **Citations**: Include all sources cited in the proposal.


The End