# Report 1: Project Proposal Report (Initiation Phase)

## Project Title

* Offline Information Technology Risk Assessment Tools

## Team Members and Roles

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Student ID | Student Name | Role |
|  | HE191442 | Nguyễn Tiến Thành | Head manager |

## Objective and expected outcome

* Develop an offline WPF desktop tool to assess risks for IT/security/engineering systems.
* Allow users to define and store assets, threats, and vulnerabilities.
* Automatically calculate risk scores using customizable formulas (e.g., CVSS-like).
* Generate risk matrices and printable reports for audits and planning.

## Scope and Technical Requirements

## WPF Desktop Application using C#.

## Local data storage using SSMS or JSON (offline use).

## Modules for asset/threat/vulnerability definition and scoring.

## Interactive risk matrix generation and offline reporting.

## Optional rule-based system or decision tree for risk recommendation.

## Initial Implementation Plan

|  |  |  |
| --- | --- | --- |
| Phase | Activities | Timeline (Weeks) |
| 1. Setup & Design | Requirements, data model, UI mockups, matrix layout | Week 1 |
| 2. Development Phase 1 | Asset/threat input, scoring engine, local DB setup | Week 2 |
| 3. Development Phase 2 | Risk matrix UI, report generation, recommendation logic | Week 3 |
| 4. Testing & Finalizing | Test cases, report export validation, project demo | Week 4 |

## Resources and Tools

## Development Environment: Visual Studio 2022 or 2024

## Framework: .NET 8 or .NET 9 with WPF

## Database: SQLite or embedded JSON/XML

## Libraries:

## Entity Framework Core or manual file I/O for offline mode

## MVVM Toolkit (CommunityToolkit.Mvvm)

## Version Control: Git (GitHub repository)

## Database Tool (Optional): SSMS

## Risk Assessment

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Likelihood | Impact | Mitigation Strategy |
| Risk scoring miscalculation | Medium | High | Design and review formulas with test cases early |
| Data loss (offline mode) | Low | High | Use auto-backup for local DB or save states |
| Complex matrix visualization | Medium | Medium | Use chart libraries or pre-built UI templates |
| User unfamiliarity with risk terms | High | Medium | Include tooltips, basic tutorial within app |
| Over-scoping decision logic | Medium | Medium | Start with basic rules, extend iteratively |

## References (Optional)

* Include any relevant references or initial sources consulted during the proposal preparation.