Assignment 1 Guidance

# Task 1 – Software Requirements Specifications and Software Design (P1 – P2 – M1)

First, you need to write a Software Requirements Specification to describe user and system requirements. You can use the included template (SRS-template.docx).

In order to be well-prepared before the implementation, you could produce the Technical Design including the below items: Entity Relationship Diagram (ERD), Class Diagram, and Activity Diagram of the system.

For Risk assessment, you need to identify Risks (e.g., technical problems, Human resources, Time Management, etc.) and perform Risk Assessment.

*Word limit: No word limit*

# Task 2 – Technologies evaluation (P3 – M2)

For this part, you need to perform a set of evaluations of different software development tools, techniques, and technologies for the project such as:

* Design Tools (đặc điểm, chức năng)
  + Tools to design UML
  + Tools to design User Interface
* Front End technology stack
  + Programming Language: **JavaScript**, TypeScript, etc.
  + HTML/CSS/SCSS/SASS/LESS etc.
  + JavaScript Library / Framework: Angular, ReactJs, VueJs, jQuery, Ajax, etc.
  + CSS Framework
  + **Razor, Bootstrap, HTML, jQuery**
* Back End technology stack
  + Programming Language: e.g. Java, PHP, Python, C#
  + Operating System: Linux, Windows
  + Web Server + Hosting: nginx, Apache, **IIS**
  + Database: MySQL, SQL Server, PostgreSQL, MongoDB, etc.
  + ~~Hosting: Firebase, Azure, AWS, Google Cloud~~
  + Frameworks: Laravel, Express, **.NET** **Core**, Flask, Django, etc.
* Tools for source control management (GitHub or GitLab)
* Software Development Models

In order to make your chosen tools, techniques, and development tools clearer, you will have to justify your choice with clear explanations and evidence.

Then, you have to conclude which tool, and technology are described above to make the project.

Then you will illustrate all your findings on how to use these by drawing the overview

*Word limit: 5000 – 7000 words*

Software Requirements Specifications

Use *SRS-template.doc* and *Risk-management-matrix-template.docx*

Evaluation Report

## Chapter 1 - Design Tools

1. Tools to design UML
2. Tools to design User Interface
3. Conclude which tools will be used for the design of the application

## Chapter 2 - Front End technology stack

1. Front End Programming Language
2. HTML/CSS/SCSS/SASS/LESS etc.
3. JavaScript Library / Framework
4. CSS Framework
5. Conclude which Front End technologies will be used for the development

## Chapter 3 - Back End technology stack

1. Back End Programming Language
2. Operating System
3. Web Server
4. Database
5. Hosting
6. Frameworks
7. Conclude which Back End technologies will be used for the development

## Chapter 4 - Tools for source control management

1. Git, GitHub, GitLab, etc.
2. Conclude which tools will be used for the development

## Chapter 5 - Software Development Models

1. Introduce several SDLC models: Scrum, Waterfall, V-model, etc.
2. Conclude which SDLC model will be used for the development (Waterfall, Scrum, etc.) with explanations

# Chapter 6 - Illustrate all your findings on how to use these by drawing the overview

