# Enhancing Health Outcomes Through AI Applications

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## Overview

This term assignment requires students to design an AI-driven solution addressing health challenges. Teams will choose one of the following focus areas:

1. **Gamification of Health Literacy** – Educate patients with chronic conditions using interactive tools.
2. **Gamification of Nutrition & Healthy Eating** – Provide AI-based meal planning and nutrition tracking with gamified rewards.
3. **Gamification of First Aid & Emergency Response** – Develop an educational game for first aid training with AI-driven simulations.

Teams will apply software engineering principles to define requirements, develop UML models, and create a prototype GUI, **focusing on feasibility, innovation, and value.**

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## Work in Teams

- Up to 10 members per team.
- Include a cover page with team members' names and IDs in each deliverable.
- Only one member submits on behalf of the group.

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## Assignment Goals

1. Apply software engineering techniques to health challenges.
2. Emphasize functional and non-functional requirements.
3. Demonstrate the impact of user stories.
4. Develop UML models to represent system design.
5. Create a prototype GUI aligned with requirements.

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## Evaluation Criteria

1. **Innovation of Requirements (20%)** – Creativity, practicality, and alignment with health challenges.
2. **Value of User Stories (30%)** – Feasibility, cost-effectiveness, and problem-solving effectiveness.
3. **UML Design Models (20%)** – Accuracy, clarity, and logical system representation.
4. **Prototype GUI (10%)** – Usability, design, and alignment with requirements.
5. **Final Report & Presentation (20%)** – Organization, clarity, and effectiveness in conveying key insights.

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# Milestone 1: Research and System Design

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## Objectives:

- Define the project scope and focus area.
- Identify functional and non-functional requirements.
- Develop user stories aligning with system objectives.
- Create initial UML diagrams

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## Tasks:

1. **Project Proposal**
    - Select a focus area and outline objectives, target audience, and impact.
    - Detail innovation and value proposition.
2. **Requirements Documentation**
    - Identify and categorize functional and non-functional requirements.
    - Align system features with user needs.
3. **User Stories Development**
    - Define roles and interactions.
    - Ensure usability, feasibility, and cost-effectiveness.
4. **UML Modeling (Continue to Milestone 2)**
    - Develop initial Use Case and Class Diagrams.

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## First Milestone Submissions:

- Project Proposal Document
- Requirements Document
- User Stories Document

**Submission by <u>ONE AND ONLY ONE TEAM MEMBER .</u>**

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# Milestone 2: Prototyping and Final Deliverables

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## Objectives:

- Develop a prototype GUI aligned with user stories.
- Refine UML diagrams for clarity.
- Prepare the final report and presentation.

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## Tasks:

1. **Prototype GUI Development**
    - Create an intuitive interface showcasing key features.
    - Align with functional requirements and user stories.
2. **Final UML Models**
    - Complete and refine Use Case and Class Diagrams.
    - Validate logical structure and interactions.
3. **Final Report & Presentation**
    - Summarize project goals, methodology, and outcomes.
    - Detail the feasibility and impact of the solution.
    - Prepare a 10-minute presentation covering key aspects.

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## Final Submissions:

- All first milestone documents
- Design Document
- Final Report
- PowerPoint Presentation

**Submission by <u>ONE AND ONLY ONE TEAM MEMBER .</u>**

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