COMPULSORY EXERCISE BLOCK 1

Analyze the following proposal:

We are going to develop a game called "Galaxy Quest". It will have both a web version and a mobile version to provide accessibility across multiple platforms, so we will need technology that supports this versatility.

Players can embark on solo missions against AI-controlled adversaries or engage in multiplayer missions with other players over the Internet.

We will require high-bandwidth web hosting to ensure smooth online gameplay experiences. Additionally, we will use a MySQL database to store user data and game progress, always adhering to data protection regulations.

In the game, players will take on the role of space explorers from various factions: the United Earth Federation or the Nova Pirates. Players may be registered users (who must log into the application) or guest users. Registered users can choose any faction, but guest users will only be able to choose the Nova Pirates. Each faction has unique spaceships with customizable features and weapons (e.g., photon torpedoes, plasma cannons).

At the beginning, users will select a difficulty level (Easy, Medium, or Hard), which will determine the game's challenge.

Each spaceship is stationed at a coordinate (x, y, z) in a 3D space grid when the game starts. Players will take turns navigating their ships, exploring planets, and engaging in battles. When encountering adversaries, players choose which ship and weapon to use. Each weapon has a special ability that can be activated, dealing extra damage but consuming more energy.

Weapons have a finite amount of energy that decreases with each use. When depleted, the weapon becomes unusable unless the player is a registered user who has accumulated resources from previous successful missions.

Each ship has a shield system that absorbs a certain amount of damage before affecting the ship's hull integrity.

If a ship avoids damage for five consecutive turns, its shields will regenerate to full capacity.

During each turn, players can perform actions such as moving, scanning for enemies, or attacking. The opposing player is notified of any damage taken.

The game continues until one faction's fleet is destroyed or the United Earth Federation decides to retreat (the Nova Pirates never retreat).

Backups non-functional

Upon game completion, a leaderboard of top players is updated. Winners receive points added to their profile, which they can exchange for upgrades or additional resources in future games.

What do you have to do?

You will have to write a document with the following sections:

- Cover Page: Title "Galaxy Quest Game Analysis," class/group (e.g., 1st DAW/DAM), and your name.
- Table of Contents
- Introduction: Explain the project to be developed.
- Software Requirements Specification (SRS): Include three subsections:
  - Functional Requirements
  - Non-Functional Requirements
  - System Requirements

Specify the requirements of each type based on the information provided in the introduction.

- Use Case Diagram: Illustrate the general behavior of the project. Make sure to include extends and include relationships where appropriate.
- Two Activity Diagrams: Create activity diagrams for two use cases within the project.

Assessment

- SRS: 3 points
- Use Case Diagram: 3 points
- Activity Diagrams: 3 points (1.5 points each)
- Presentation (cover page, cleanliness, clarity, etc.): 1 point