Space Defenders

I. Front-end
  A. **HTML**: We currently plan to use HTML to design the base of our website that hosts the game. We'll need the HTML page to incorporate different elements ranging from text to CSS for styling. It is crucial for the structure and layout of our game, such as the menu, the buttons, and the game board. We can also ensure accessibility standards are met for users with disabilities.
  B. **CSS**: a CSS framework will allow for a stylistic design that will be consistent and differ when necessary across the different HTML web pages.
  C. **JavaScript**: Using JavaScript provides an interactive experience for users in our game. It will help with handling game logic, user decisions, and communication with the backend of our game. Through JavaScript, we can also animate game elements for exciting gameplay.

II. Back-end
  A. Using **SQLite3** to create a database for player scores, player assets, and towers.
  B. Users will have an ID (their username) that will be unique to every player, preventing any new users from taking the username of an existing player.
  C. Scores from all players will be stored in a database using SQLite3, with the highest scores displayed at the top.

III. Frameworks
  A. Plan to use **Flask** framework to host and use web-based games. We plan to install the flask framework in an isolated environment. Upon activation, the game will be available for play in a web browser.
  B. The current plan is to use pure **JavaScript**. We'll attempt to get a functional barebones demo with pure JavaScript. But if we find a framework that helps us produce a demo more easily. We'll switch to it and update the requirements analysis document early in sprint 2.

IV. Target Audience and Stakeholders
  A. The target audience of space-defenders is people 13 years and up who enjoy the challenges of fast-paced decision-making as our game's attacks come from timed

waves. Audiences would also typically be interested in astronomy as the setting takes place in deep space and hostiles and materials are space-themed. Our game will include both ground and air warfare, but not in an extremely violent manner. When our ship or enemies are destroyed, they will just explode in flames. Tower defense fans will likely enjoy this game.

V. Graphics & Sprites

A. We will find sprites and art on Itch.io or other websites that provide game assets. AI can also be used to generate art.
- Main character "sprites" will be icons automatically given to players and will not be able to be changed as it is irrelevant to the game play.
- Default home-base towers will (most likely) mimic the minecraft furnaces and will be scattered around the starting grid
- Gunnery ships will be the X-wing starfighter from star wars and will be an uploaded image onto the grid
- Nuclear ships,cannons, UFOs and space stations will be AI generated and inserted into the program as an image.

B. The background will be space art with stars, asteroids, and planets. It will change from level to level. It will most likely be a combination of AI generated imagery as well as actual images from space.

C. Sprites that will be used for the production side will be AI generated simple machines, pipes, gears and conveyors inspired by Minecraft and Factorio.