Identifying Objects and Responsibilities for Space Invaders implementation, I have identified some candidate classes (non-exhaustive list, might need to need to add more or remove some):

- **Game**:
  - Responsibility: Manages the overall game state, including the starting and ending of the game, and the transition between different phases such as menus and gameplay.
- **PlayerTank**:
  - Responsibility: Represents the player's tank with capabilities to move and shoot, keeps track of the player's lives and scores.
- **Alien**:
  - Responsibility: Base class for different types of enemies, handling common behavior like movement and rendering.
- **AlienType1**, **AlienType2**, **AlienType3**:
  - Responsibility: Subclasses of **Alien** that define specific behaviors and appearances for each alien type (optional I think the game seems to have only one type of alien or I haven't played enough). At least one type should have the ability to shoot.
- **Bullet**:
  - Responsibility: Represents a bullet fired by either the player or an alien, managing its movement and collision detection.
- **Menu**:
  - Responsibility: Manages the game's start menu and displays options such as "how to play" and "score reports." Perhaps a login pane, we could make it simple and aesthetic like a simple start game menu with the score board displayed in the corner somewhere.
- **ScoreBoard**:
  - Responsibility: Manages the score-saving system, recording high scores and displaying them in the menu or also while the game is running.
- **AnimationManager**:
  - Responsibility: Handles animations within the game, ensuring that different in-game events are visually represented.
- **SoundManager**:
  - Responsibility: Manages sound effects and music, playing different sounds in response to game events.
- **DifficultyManager**:
  - Responsibility: Adjusts the game's difficulty over time by altering parameters such as alien speed, shooting frequency, and formation patterns. This will be interesting to implement, please add ideas as you see fit below.