**Game Mechanics:**

* Player touch enemy = death
* Player touch enemy bullet = death
* Player kill enemy = point increase + gold increase
* Player kill boss = next level
* Player die = lose life
* Player 0 lives left = game over
* Top down vertical scrolling shooting
* Arrow keys = movement
* Space key = shoot
* Different types of enemies

**Core Game Play:**

* Top down vertical scrolling shooter.
* You are an alien ship
* You shoot at waves of enemies to find a boss at the end of the level
* 3 levels, about 1-2 minutes each.

**Characters:**

* You – Alien ship – 3 lives
* Types of Enemies
  + Tank enemy – lots of health, slow movement, shoots slowly
  + Normal enemy – normal speed, normal shoot speed, 2 hit kill
  + Fast enemy – fast speed, 1 hit kill, no shooting
* All enemies follow a certain path across the screen
* Types of bosses
  + Level 1 – around 30 hits = kill. Shoots quicker than normal enemy, moves side to side, moves at half speed of tank
  + Level 2 – around 50 hits = kill, shoots quicker than level 1 boss, moves side to side and up and down, moves at speed of tank
  + Level 3
    - Phase 1 – 50 hits = phase 2, shoots same as level 2, moves quicker than level 2, moves like level 2, moves at speed of normal enemy
    - Phase 2 – 60 hits = kill, shoots faster than phase 1, moves quicker than phase 1, moves like phase 1, moves at speed of normal enemy.

**Gameplay Elements:**

* After each level, upgrade ship to next type.
* After each level, choose possible extra upgrade for your ship
* Upgrades
  + Increase in shooting speed
  + Increase in movement speed

**Game Physics and Statistics:**

* Move up, down, left or right. Speed is dependent on your upgrades
* Player hitbox is slightly smaller than image
* If player hitbox collides with enemy hitbox, player dies
* X amount of gold will be required to get an upgrade
* X amount will drop per enemy kill (Most -> least = Boss, Tank, Normal, Fast)
* X amount of points received for score per enemy kill (Most -> least = Boss, Tank, Normal, Fast)
* Depending on how many upgrades you have will depend on both Movement speed and Shooting speed.

**Artificial Intelligence:**

* All tanks, normal and fast enemies will follow a certain path and shoot at certain direction, depending on their position.
* Bosses will also follow a certain path
* Boss shooting will have multiple attacks (not certain how many yet)
* A random number generator will determine which attack the boss uses

**Multiplayer:**

* None

**User Interface:**

* Main menu with start button
* In game = Score, Gold, lives
* In upgrade menu = images of upgrades that you have/don’t have

**Flowchart:**

