Battle Tank

**Why: I believe people should still be able to play the older(1990s) games and to understand from where humans had started to where they have come in the context of creating games. I believe planning and strategy are 2 of the key components in clearing games.**

Description -

* It is a 2D shooting game where the user controls their tank in a strategic manner to protect their bird while destroying the enemy tanks.
* The game consists of many different levels, tanks, power-ups, maps but I will be making only 1 level, 1 type pf tank and no power-ups. This is discussed in detail later in the document.

Aspects of Battle Tank -

* Game Menu
* Play button
  + It is a text that will be loaded when the game opens.
  + Upon clicking it, all the levels presently available in the game will be shown. **(not included in the project)**
  + Upon clicking it, the first level of the game will automatically start.
* Settings button **(not included in the project)**
  + It is a text that will be loaded when the game opens.
  + Upon clicking it, a menu will provide customizable settings which control certain aspects of the game such as music, volume and graphics.
* Exit button
  + It is a text that will be loaded when the game opens.
  + Upon clicking it, the game will close.
* Multiple Levels **(not included in the project)**
* Multiple levels
  + There will be 8 levels to choose from and each level consists of 5 battles.
* Each level has a different map and algorithm
  + Each level has 5 different battles which differ from all other levels and their battles.
  + They are different in map structure, map variation, enemy tank variation, time and power ups and their location.
* Player Tank
* Shoot bullets
  + Has the ability to shoot bullets.
  + A bullet can be fired only after a specific time
* Destroy enemies
  + If a bullet collides with an enemy tank, the enemy tank is destroyed.
  + A bullet cannot pass through multiple enemy tanks
* Needs to protect bird to win
  + The player tank needs to make sure no bullet of the enemy tank hits the bird in the given time to win the game.
* Can lose game by friendly fire
  + If a bullet shot from the player tank collides with the bird, the game ends and the enemy tanks win.
* Single player
  + There will be only 1 player tank that exists.
* Multiplayer **(not included in the project)**
  + 2 people can play a level together.
  + They will play locally on the same computer.
  + It is not an online game.
  + The controls, tanks, bullets, graphic and colors for each player will be different.
* 3 Lives **(not included in the project)**
  + If a player does get destroyed due to an enemy bullet, they will lose a life.
  + They will respawn if they have at least 1 life.
  + If they have 0 lives available, the player will not respawn.
* 1 Life
  + If a player does get destroyed due to an enemy bullet, the game will end, and the enemy tanks will have won.
* Enemy Tank
* Different types of enemies **(not included in the project)**
  + There are different types of enemy tanks: Each type is different from the other by shooting speed, movement speed, defense and logic.
* Multiple enemies
  + Throughout the battle different variations of enemies will be spawned-sometimes even the same type.
* Destroy player
  + If a bullet collides with the player, the player will die, and the game will end. The enemy tanks would have won.
* Shoots bullets
  + Has the ability to shoot bullets.
  + A bullet can be fired only after a specific time
* Random movement
  + If an enemy tank collides with an unbreakable object, it will change its direction into any random direction.
* Needs to hit bird 1 time to win
  + If a bullet shot from the enemy tank collides with the bird, the game ends and the enemy tanks win.
* No friendly fire
  + If a bullet shot from the enemy tank collides with another enemy tank, none of the enemy tanks will be destroyed and the bullet will pass through it.
* Bird
* Spawns at the bottom middle of screen
  + The bird is located at the bottom center of the screen every battle and level.
* Protected by bricks
  + It is protected by bricks from all sides; therefore, enemy tanks need to break the bricks before killing the bird.
* Bullet
* Every bullet is the same for enemy and player
  + The player and enemy tank will shoot the same type of bullet excluding power-ups.
* Graphics is different
  + The color of the bullet will change depending on which tank is shooting it: enemy is red, and player is green.
* Concept is the same
  + The concept and purpose behind each bullet are the same: destroy whatever is breakable.

* Power-Ups (not included in the project)
* Buffs the player bullets
  + Upon landing on the location of the power-ups, the player tanks gain a significant buff.
* Different power-ups buffs in different ways
  + Power-ups can buff movement speed, bullet speed, provide shield, provide an extra life or provide a different and better type of bullet.
* Is player exclusive
  + Power-ups are only available to the players.
* Map
* Brick blocks
* Breakable by player and enemy using bullets
  + Brown bricks which are destroyed upon collision with player or enemy tank’s bullets.
* Metal blocks
* Unbreakable blocks
  + Metal bricks which are not destroyed upon collision with player or enemy tank’s bullets or due to any other factor.
* Grass blocks **(not included in the project)**
* Can't see the bullet, enemy or player when it passes through it
  + Whichever object-bullet, player tank or enemy tank- passes through it cannot be seen by the user.

* Water blocks **(not included in the project)**
* Only bullets can pass through
  + Player and enemy tanks cannot pass through these blocks and will be blocked.
  + Only bullets can pass through these blocks.