concept:

A battle between two tanks. A player will have a given amount of time to destroy an enemy tank. The player will have the ability to drive the tank around the map. Additionally, the player will be able to aim the barrel and fire at the opposing tank. The tank will be able to use the landscape to block enemy shells.

Rules:

* A shell fired by a tank will inflict x amount of damage to the opposing tank.
* A tank has x amount of health before it is considered dead.
* The first tank to decrease the opposing tank's health to zero or lower will be considered the winner.
* If the last shells fired from each tank cause both tanks to have zero or less health, then the match ends in a tie.
* Each match will last X minutes. If neither tank's health has reached zero or less when the time limit is reached the following will happen:
  + tanks will be prevented from firing (tank movement is still allowed)
  + Any shells shot prior to the match time ending will be allowed to resolve normally
  + After all shells have been resolved, a check will be done to see if a tank has been destroyed
    - If yes, the non-destroyed tank is the winner of the match
    - If No, a check is done to see if one tank has more health than the other
      * If one tank does have more health than the other tank, it will be considered the winner
      * If neither tank has more health, the match is considered a draw

Requirements:

Tank model

Tank movement controller

AI for driving the tank

Controller for aiming and firing the tank barrel

Landscape/map

Ai for aiming and firing

projectile trajectory maths

Sound effects for firing, tank movement, explosions

explosions Particle effect, firing Particle effect, maybe dust particle effect when tank is moving, smoke effect after a tank has received a certain amount of damage