Tower Defender

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# Game Description

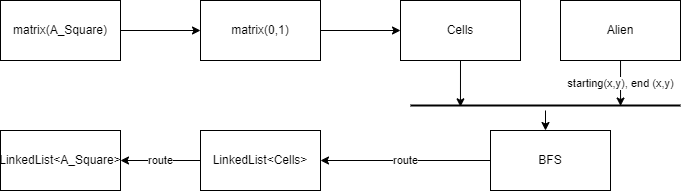
A 2D game of type tower-defense. Enemies are trying to swarm your base from the entry point. Defeat them to earn credits, which you can spend to build defensive buildings.

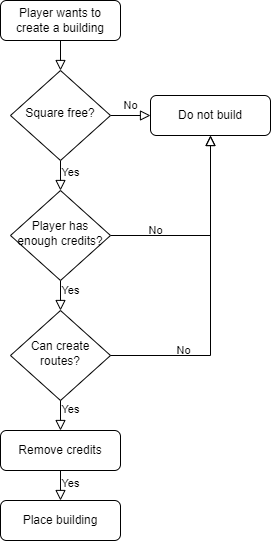
# Features

* 2D Gameplay
* Controllable avatar which can shoot enemies
* 3 Types of enemies
* 2 Types of towers
* Toggle between building mode and action mode

# Implementation features

* Map
  + Divided into a grid of 525 squares (25x21)
  + On each square, player can place a building
* Player character
  + Can move around the map
  + Can shoot monsters
  + Collides with towers
* Aliens
  + 3 Types of monsters
    - Slow – a lot of HP, slow movement speed, a lot of credits
    - Medium – average HP, movement speed and credits
    - Fast 🡪 small HP, fast movement speed, not a lot of credits
* “AI”
  + Pathfinding done using BFS-algorithm
  + Provides shortest possible path to the destination (or no path if it is not possible to create one)



* Building
  + - * Player can spend credits earned from defeating monsters to build towers
      * 2 types of towers
        + Shooting tower

100 credits

Shoots enemies in range of the tower

Disappears after 30 seconds

* + - * + Slowing tower

50 credits

Slows enemies in range of the tower (stacking)

Disappears after 10 seconds

* + - * Towers can be placed on any square if 3 base conditions are met
        + The square is not occupied
        + New building will not block path to the destination from spawn and for any Alien already spawned on the map

Whenever new building is about to be placed, routes are calculated for every existing alien and the spawn point, and they are updated

* + - * + Player has enough credits