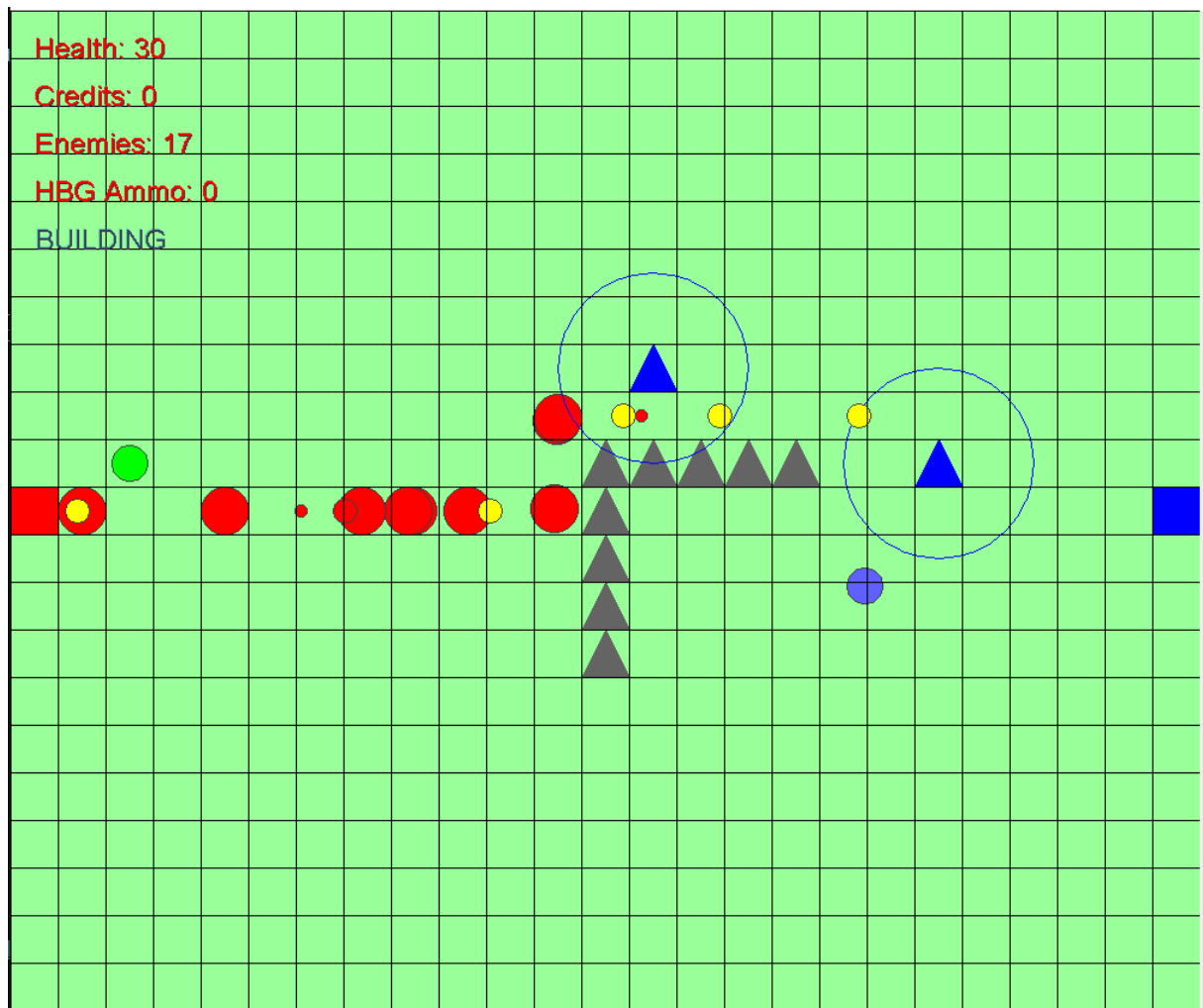


Tower Defender

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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.

Controls

Normal mode

- WSAD to move
- Left-click → shoot regular bullet
- Right-click → shoot HBG bullet
- TAB → enter building mode

Building mode

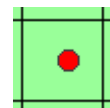
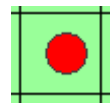
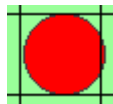
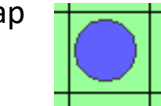
- Left-click → place Regular tower
- Right-click → place Slower tower
- TAB → enter regular mode

Features

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

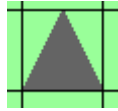
Implementation features

- 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

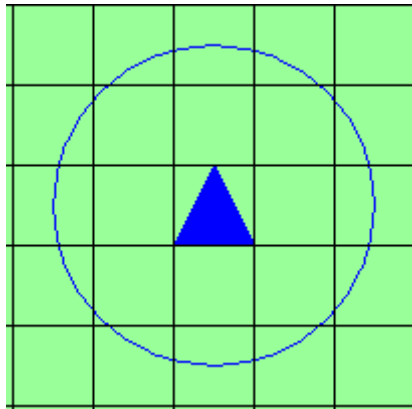


- Buildings

- Turret building → shoots at nearest enemy in range of the turret
 - Cost: 200 credits
 - Despawn time: 90 seconds

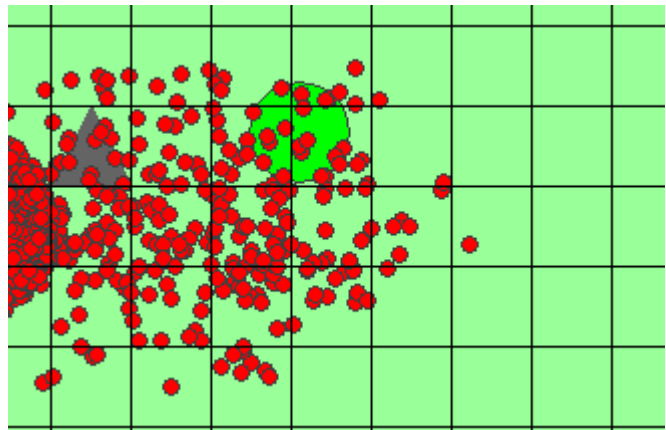


- Slow building → slows enemies in a radius
 - Cost: 150 credits
 - Despawn time: 45 seconds



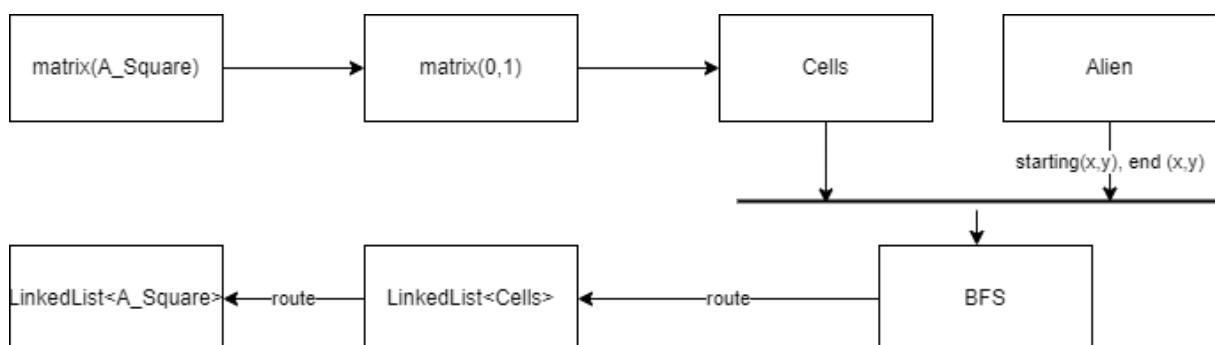
- Bullets

- Regular bullets → shot by Player using left click, shot by turrets
- HBG bullets (green) → spawn randomly around the map, shot by player using right-click, destroys enemies around



- “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
- 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

