COMP 4451 Project

Steel Of Stalin

Group 18

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Brief Summary

Features & Challenges

- Frontend User Interface

- Backend gamemap design and injection

- Algorithm & Evaluation

Features & Challenges → Frontend

- User-friendly components
  - Start menu
  - User's resources list
  - Action menu with onclick callbacks
- Challenge → Inconsistency in css and game grid canvas
  - Solution → Switch some controls to keyboard
  - Extension → Friendly key-events instruction page

Features & Challenges → Backend

- Customized Game Map
  - Game unit strength, available resources, etc
  - Example setup hard-coded in current codebase
  - Further generation engine in C# are also provided
- Challenge → Heavy resources loading on web
  - Extension → Perform lazy loading and code splitting
  - Extension → Friendly UI for game map generation

Features & Challenges → Algorithm & Evaluation

- Heavy thinking and programming on this part
  - Design of A* algorithm for AI path-finding
  - Metric on hexagonal packing → Classify neighbor and enemies
  - Inject AI with nearby views for his subsequent decision
- Challenge → Testing & Performance Evaluation
  - Extension → Dynamic weights and bias for path-finding path

The End