

Final Project Intermediate Check-Point

Preparado por: Mateus Pedroza, up201601876

ARCHITECTURE DESIGN

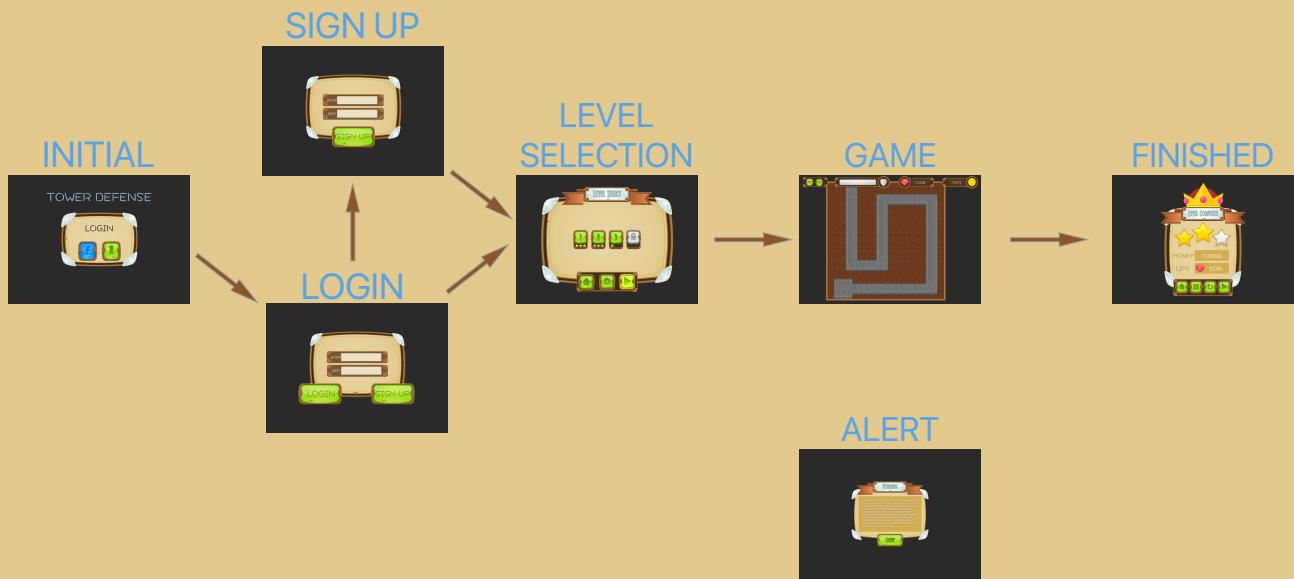
Package and class diagram (UML)

Design of behavioural aspects

Design Patterns

GUI DESIGN

Page transitions

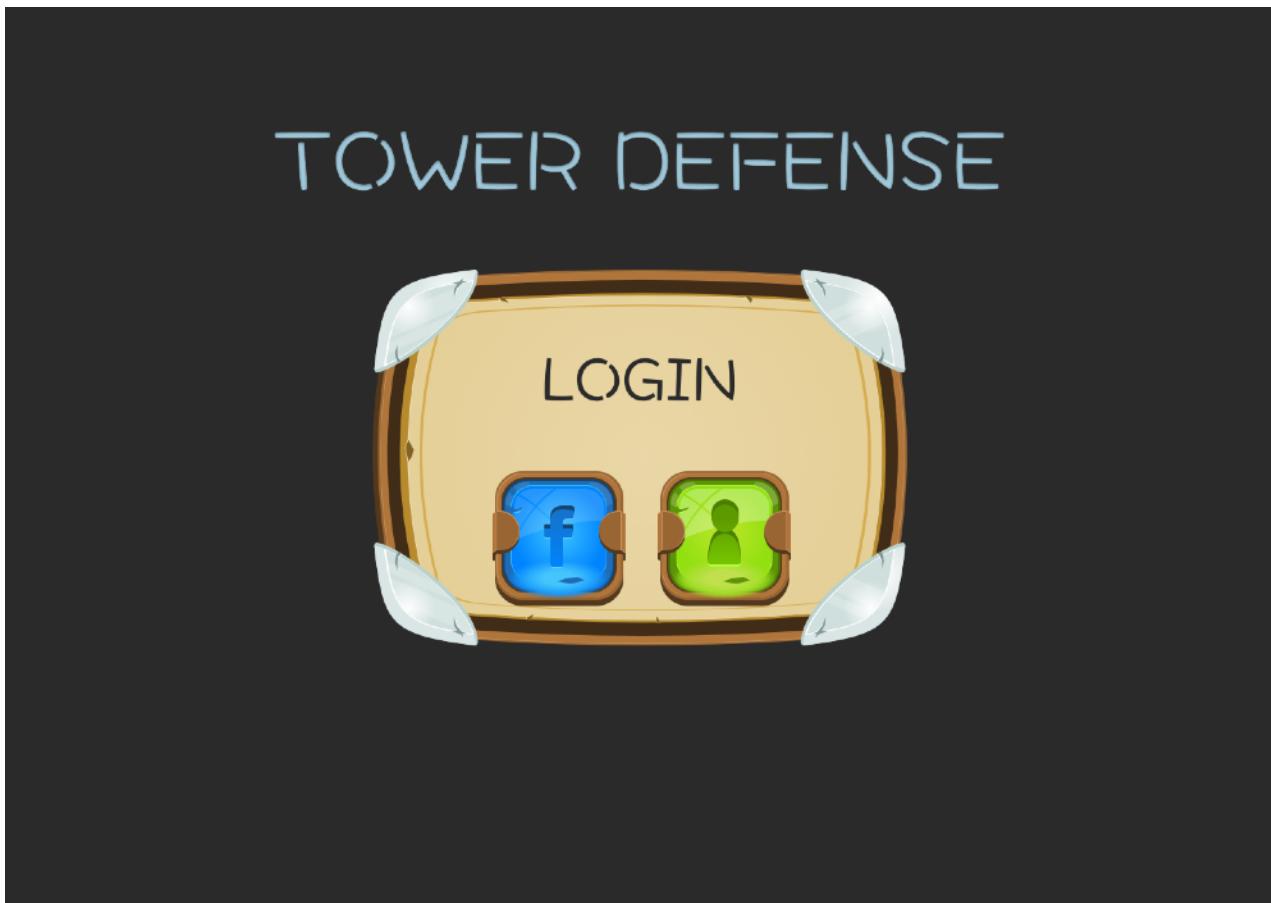


Identification / Listing of the main functionalities

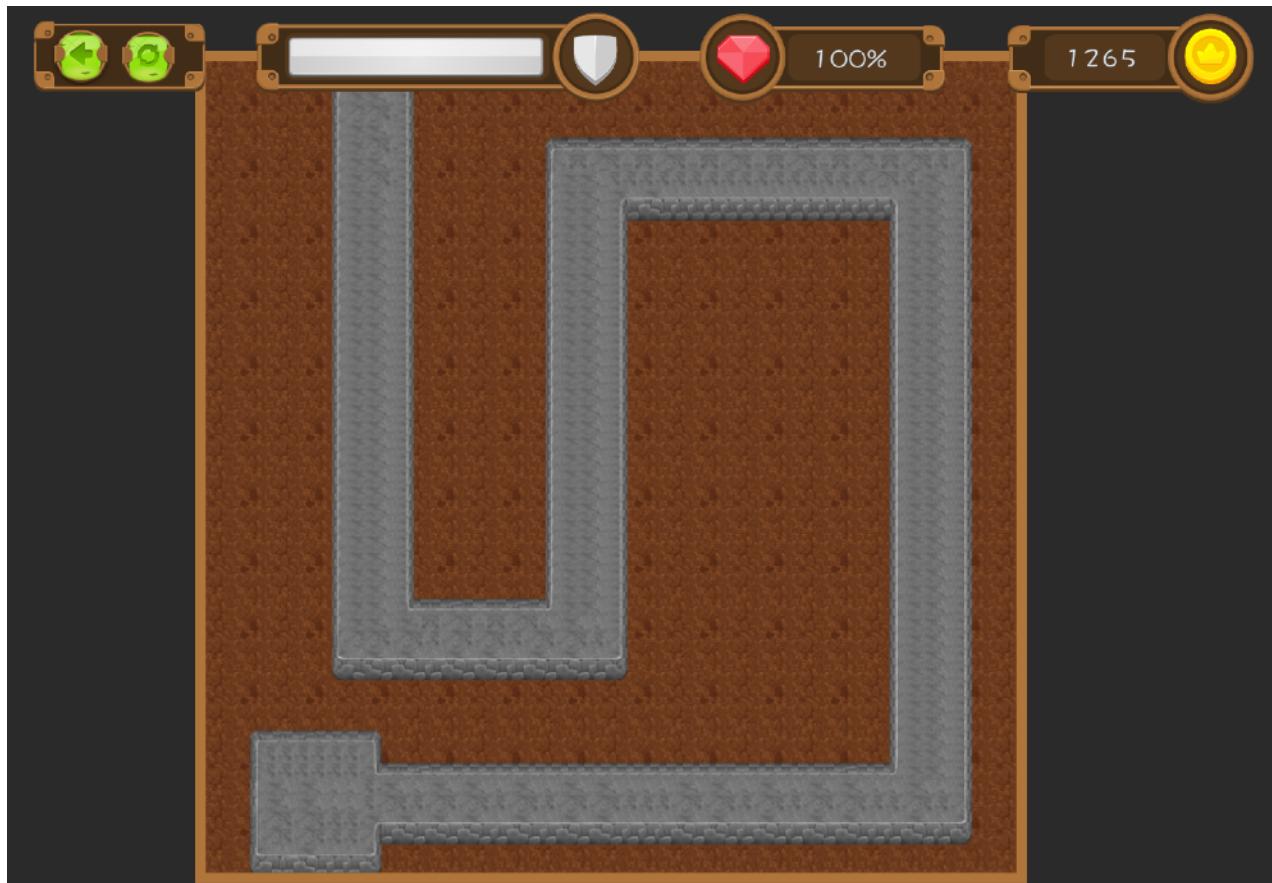
- **Initial:**
 - Allows player to login.
- **Login:**
 - Player can choose to login or sign up.
- **Level selection:**
 - Player can choose available levels, playable levels need to be unlocked.
 - Menu bar with options to go back to login screen, configure game and play selected level.

-
- **Game:**
 - Menu with options to go back to level selection screen or restart level.
 - Bar showing crystal health, wave number and player gold.
 - **Finished:**
 - Shows the achieved score, remaining crystal health and gold.
 - Menu bar with options to go back to login screen, level selection screen, restart level or play next level.
 - **Alert:**
 - Default alert presentation, shown if player entered an invalid e-mail address for example.

GUI mock-ups









TEST DESIGN

Expected final test cases

- `test_game_begin();`
 - Check if game started successfully.
- `test_game_ended();`
 - Check if game ended successfully.
- `test_player_selected_buildable_area();`
 - Check if game only allow player to build towers in buildable areas.
- `test_player_area_selection_animation();`
 - Check if area selection animation is being presented without errors.
- `test_player_build_tower();`
 - Check if player built a tower with success.
- `test_player_upgraded_tower();`
 - Check if player upgraded a tower with success.
- `test_player_deleted_tower();`
 - Check if player deleted a tower with success.
- `test_tower_attack();`
 - Check if tower is attacking nearby monsters and if he is receiving damage.
- `test_monster_path();`
 - Check if monster is moving in it's path.

-
- `test_monster_crystal_attack();`
 - Check if monster is attacking the crystal after moving.
 - `test_monster_destroyed_crystal();`
 - Check if monster destroyed the crystal.
 - `test_monster_killed();`
 - Check if monster is killed by tower with success.
 - `test_monster_animation();`
 - Check if monster animation is being presented without errors.