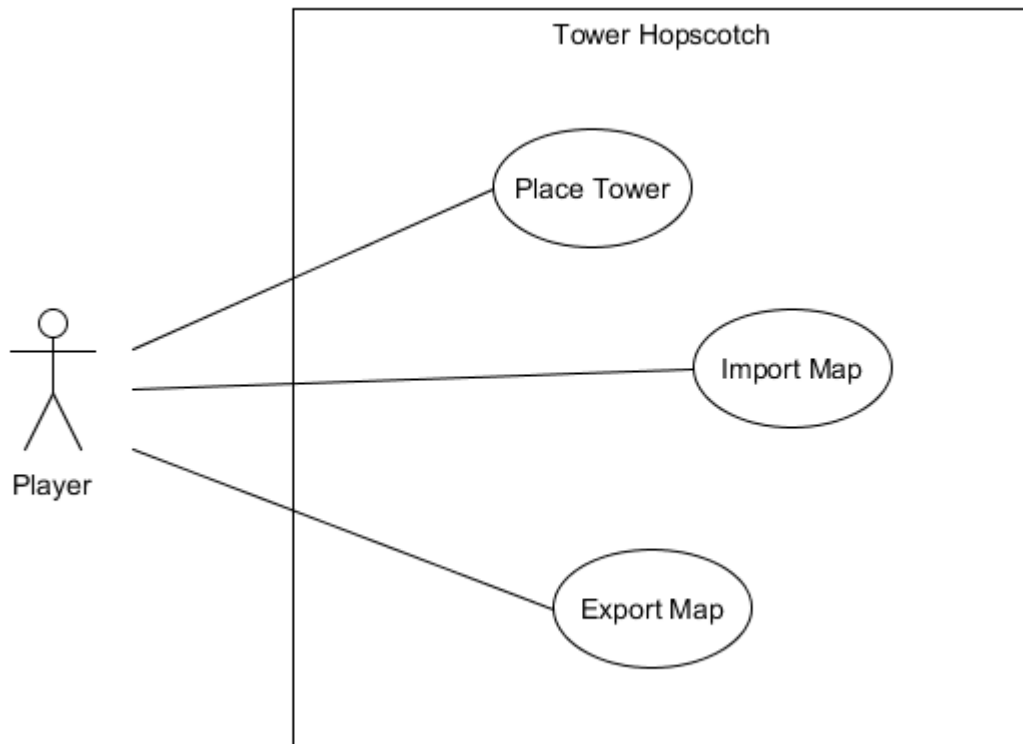# SWEN1 – Lab 2

UC: Placing Towers

Primary actors: Player

Stakeholders and Interests: Player: Wants to place a tower on the map to defend against approaching waves of enemies.

Preconditions: The Player has started a game. The game is running.

Postconditions: The Player has either added a tower to the map or could not afford building one.

Main Success Scenario:

1. The player selects a tower type to build. The selection is valid if the chosen tower type is unlocked and the players budget is not lower than the costs of the chosen tower type. If the selection is not valid, then the scenario ends here and can be restarted at any time.
2. The player selects a tile on the map to build the tower. The selection is valid if the chosen tile is neither a path tile nor is already occupied by another tower and also can fit the tower in if the tower is multilayered (Towers spanning two layers can only be placed on the lower 2 layers. Towers spanning all three layers can only be placed on the lowest layer). If there is no tile available which could be selected, the scenario ends here and can be restarted at any time.

3. The tower gets built on the selected tile and its cost gets subtracted from the players budget.
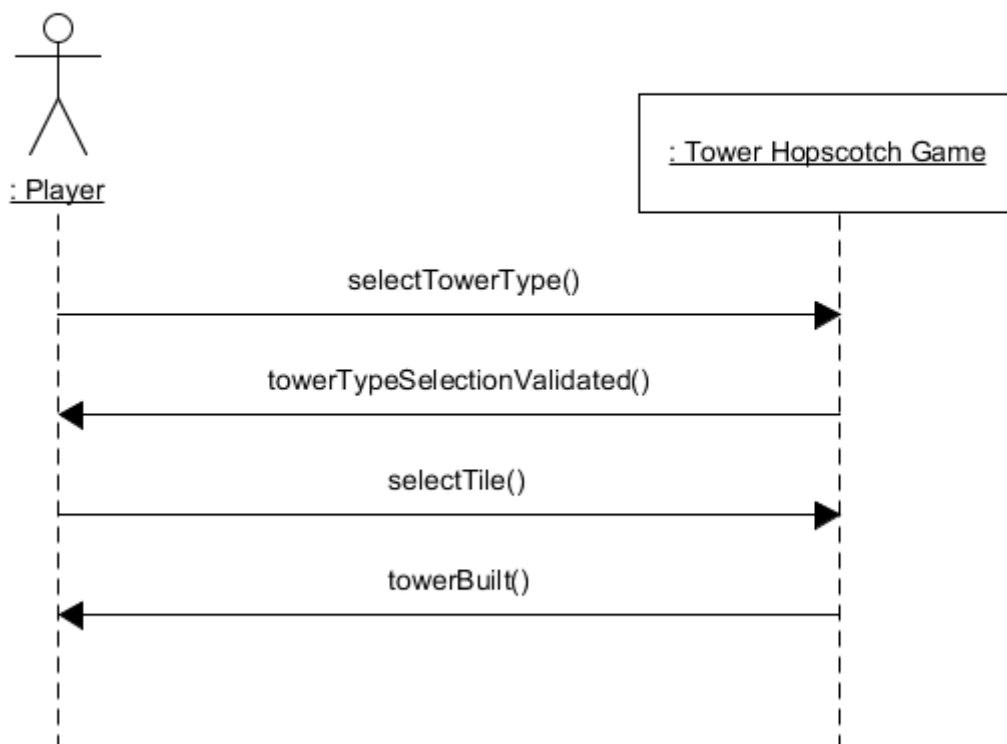
Extensions: none

Special Requirements:

- The platform must be able to run Java 8 in a graphical environment.
- The platform must be able to transmit keyboard strokes and mouse movement to the program.

Frequency of Occurrence: Initiated by player. Typically before every initiated enemy wave and during the wave itself.

Place Tower Scenario

UC: Import a Map

Main Success Scenario: The player clicks on the "Import Map" button. A dialog for choosing a file opens and the player has to navigate to a map file to import. After selection of said map file the program tries to extract the map data from the file which then is available as selectable map to play on in the menu.

Alternate Scenario:

- The player aborts the file selection: The scenario ends here and can be restarted.
- The chosen file is malformed: The map doesn't get imported and the scenario ends here and can be restarted.

UC: Export a Map

Main Success Scenario: The player clicks on the "Export Map" button and the program exports a selected map to a chosen file location.