Flood Evacuation Game

Prototype, version 1.0

About the game

This game is a prototype that attempts to simulate evacuation in the first-person perspective. The game uses basic geometry for construction of indoor rooms (such as an office or a supermarket), which the player traverses during evacuation. Evacuation happens during night time. Because visibility can impact speed of evacuation, emphasis is placed on placement of lights and signs to help guide the player to the nearest emergency exit.

The game has been made with the focus on studying human behaviour and how people perceive their environment. It comes with a replay system, which records the steps a player took to finish the level. This allows for both a source of analysis and also engagement among players looking to climb the in-game leaderboard.

How to play

Your job is to evacuate as quickly as possible by traversing a series of rooms. As of this prototype, there are four rooms in total. Some of the rooms are flooded. If flood water reaches knee level, your movement speed will decrease, thus delaying evacuation. Avoid floodwater whenever possible.


Fig 1. How the game looks like

Controls

Controls can be checked in-game by clicking the "Options" tab in the main menu. Note that in this prototype, key bindings cannot be changed.

When you start the game, movement becomes available after the initial three-second countdown. Use your mouse to look around and analyse your surroundings. You can run by holding Shift or C, and jump by pressing Space. To restart the level, press R. To leave the game, press Esc.
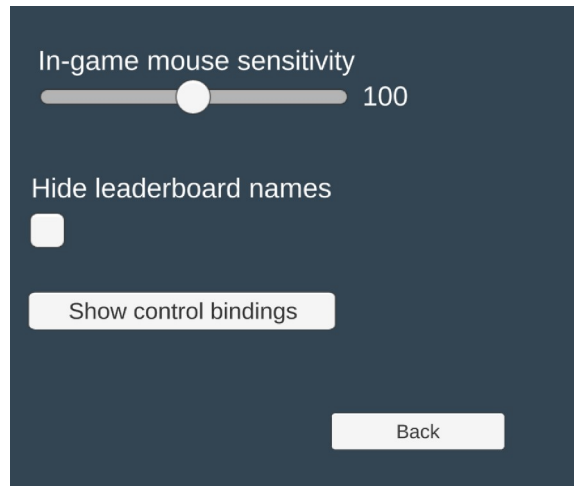
Fig 2. Options menu

Stamina system

The game employs an experimental stamina system to reflect stamina of an average person during evacuation. Running and jumping drain the stamina meter. Once the stamina runs out, the player cannot run or jump. However, the stamina will recharge overtime by walking normally.
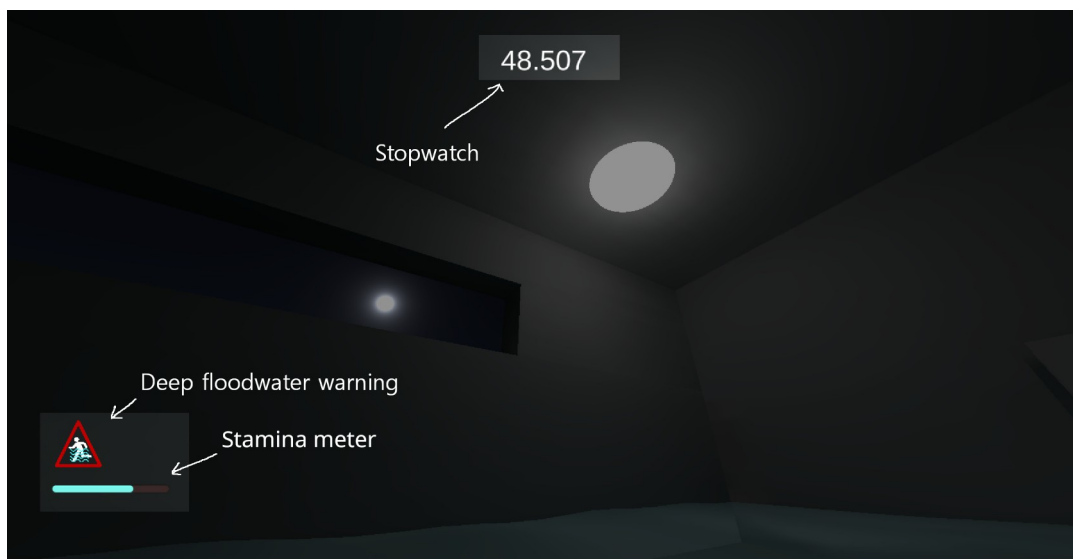
Fig 3. In-game screenshot showing stamina, floodwater warning and stopwatch

Replay system

 After a successful evacuation, a replay file is saved locally, which can be viewed in the "Leaderboard" tab in the main menu. If the player exits in the middle of the game, or evacuation exceeds 300 seconds (5 minutes), the replay will not be saved. Replay controls allow you to pause, unwind and fastforward replays.

Leaderboard

 When a player reaches a new personal best, their replay is uploaded to the remote server and becomes available in the leaderboard. This is where you can watch replays of other people. In this prototype, only the top 10 players are shown You can view a replay by clicking on the blue eye icon corresponding to one.
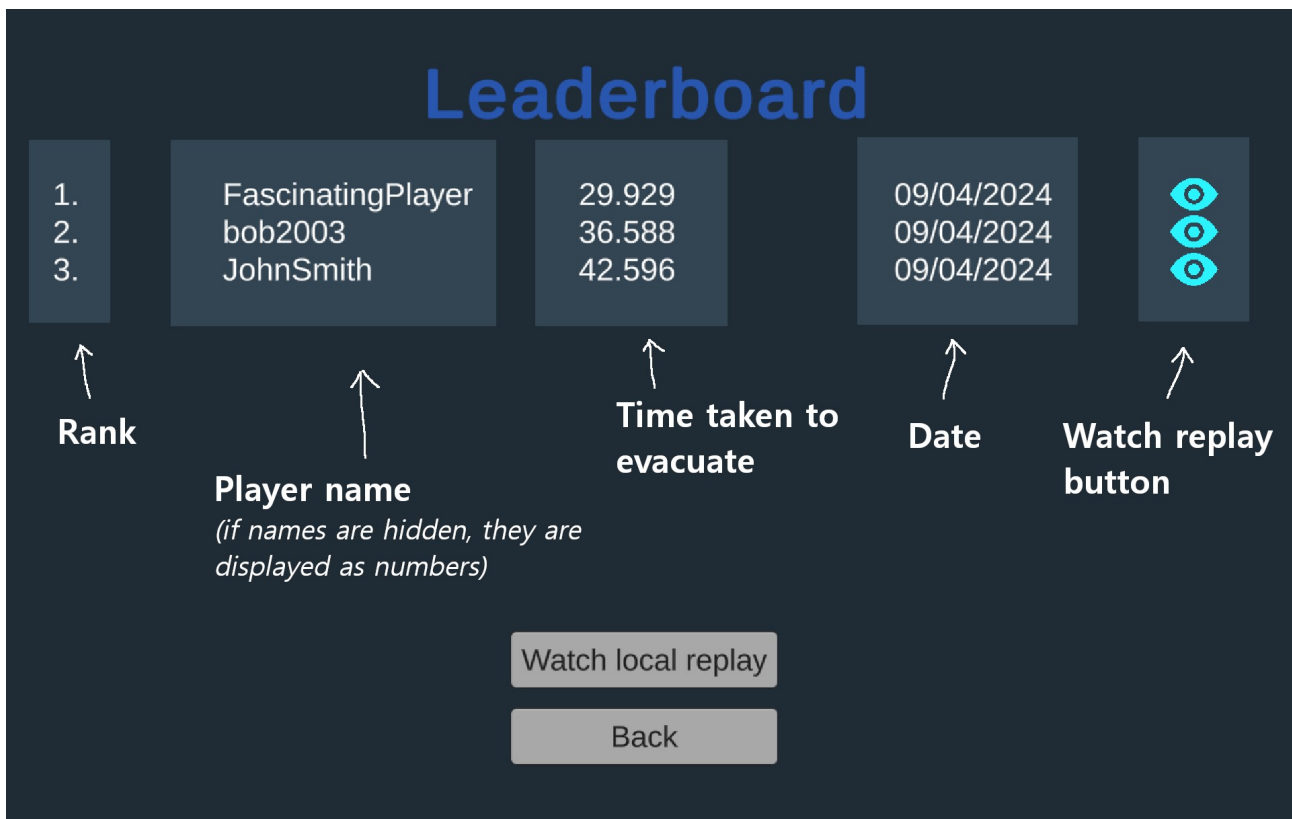

Fig 4. The leaderboard

Concluding thoughts

Thank you for checking out the game.
For more information, visit www.flood-evac-game-uoe.com