**Group Members:** Gareth Gill and John Meikle

# Feature List

The game should:

* Be text based (GUI can be added later).
* Allow the user to create a save file and, consequently, reload a game from a save file.
* Contain a game board consisting of a number of non-fixed tiles (movable), immovable tiles, walls, treasure and letters.
* Have a 'default' setup for total number of tiles, number of tiles per tile type, distribution of immovable tiles, and the number of letters and vowels for the tile variant (but allow the user to modify these).
* Give the immovable tiles access to a row of movable tiles (given they're not blocked by a wall).
* Give the player a spare tile. This spare tile can be used to replace non-fixed tiles on the game board.
* One tile **must** contain a treasure.
* Allow non-fixed tiles to be rotated by multiples of 90 degrees.
* Contain two basic moves: a tile move and a token move. Specifically, a tile move is when the player pushes their spare tile into a row or column, resulting in a tile on the opposite side of the row or column to be dropped off. This spare tile can be rotated before placement. A token move is when the player's token moves to a reachable adjacent tile without passing through a wall.
* Ensure the player's token will always start at the corner of the game board.
* Contain two game variations: treasure chase and letter chase. Specifically, a player can win treasure chase by collecting a treasure item present on the game board. A player can win letter chase by forming a valid English world with their collection of letters.
* Maintain a leader board containing the highest scores. Qualifying users enter their name at the end.
* For treasure chase, score is calculated by number of rounds taken to obtain the treasure.
* For letter chase, score is calculated by the number of rounds divided by l^2, where l is the length of the word formed.
* In terms of rules, the player can either make a tile move or a token move. To complete a round, once the player performs an action, the computer (NPC) makes a tile move.

# Use Case Diagram