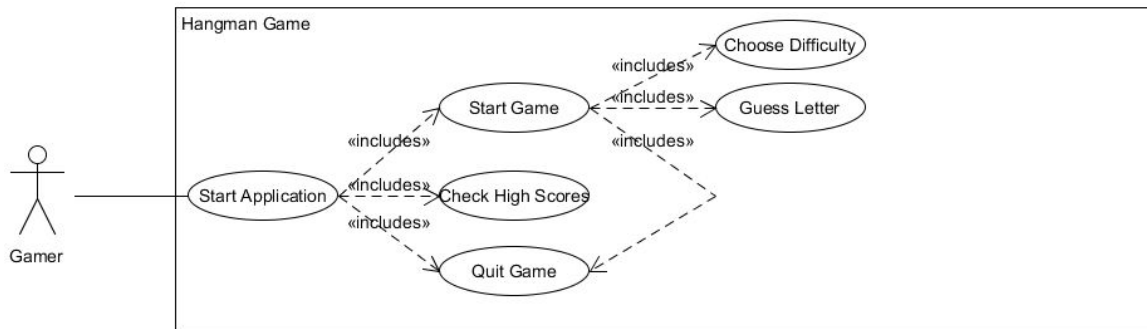


Assignment 2

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Extended Use Case Model + Diagram



UC 1 Start Application

Precondition: None.

Postcondition: The application is launched.

Main scenario

1. The application starts.
2. The system presents the main menu with the option to play, check high scores, and quit the application.
3. The Gamer makes the choice to start the game.
4. The system starts the game (see Use Case 2).

Repeat from step 2

Alternative scenarios

3.1 The Gamer makes the choice to quit the application.

1. The system quits the game (see Use Case 3)

3.2 The Gamer makes the choice to check high scores.

1. The system displays the high scores (see Use Case 4)

3.3 The Gamer enters an invalid input.

1. The system presents an error message.
2. Goto step 2

UC 2 Start Game

Precondition: None.

Postcondition: A game of hangman is initiated.

Main scenario

1. Goto Use Case 5.

Alternative scenarios

None.

UC 3 Quit Application

Precondition: The application is running.

Postcondition: The application is terminated.

Main scenario

1. Starts when the Gamer chooses to quit the application.
2. The system prompts for confirmation.
3. The Gamer confirms.
4. The system terminates.

Alternative scenarios

3.1. The Gamer does not confirm

1. The system returns to its previous state

UC 4 Check high scores

Precondition: None.

Postcondition: The high scores are displayed.

Main scenario

1. The system prints the top 10 high scores and presents the option to return to Main Menu.
2. The Gamer chooses to go back.
3. Goto Use Case 1, step 2.

Alternative scenarios

None.

UC 5 Choose Difficulty

Precondition: None.

Postcondition: A difficulty is chosen for the game.

Main scenario

1. The system displays the difficulty options (Easy, Medium, Hard) and the option to return to Main Menu.
2. The Gamer chooses the 'Easy' difficulty.
3. The system launches the game on 'Easy' difficulty.
4. Goto Use Case 6.

Alternative scenarios

2.1 The Gamer chooses 'Medium' difficulty.

1. The system launches the game on 'Medium' difficulty.
2. Goto Use Case 6.

2.2 The Gamer chooses 'Hard' difficulty.

1. The system launches the game on 'Hard' difficulty.
2. Goto Use Case 6.

2.3 The Gamer chooses to Return to Main Menu.

1. Goto Use Case 1, step 2.

UC 6 Guess Letter

Precondition: A game of hangman is currently running.

Postcondition:

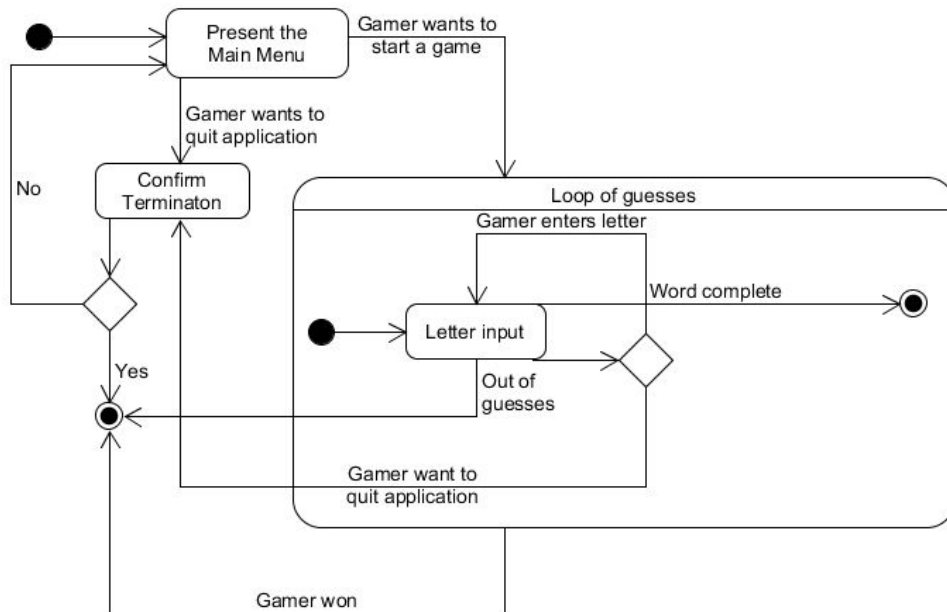
Main scenario

1. The system randomly picks a word (based on difficulty) from a pre-defined list and presents the word, using underscores.
2. The system displays the option to guess a letter, go back to Main Menu, or Quit the application.
3. The Gamer makes a correct guess.
4. The system displays a 'correct' message and displays the position(s) of the guessed letter, within the word.

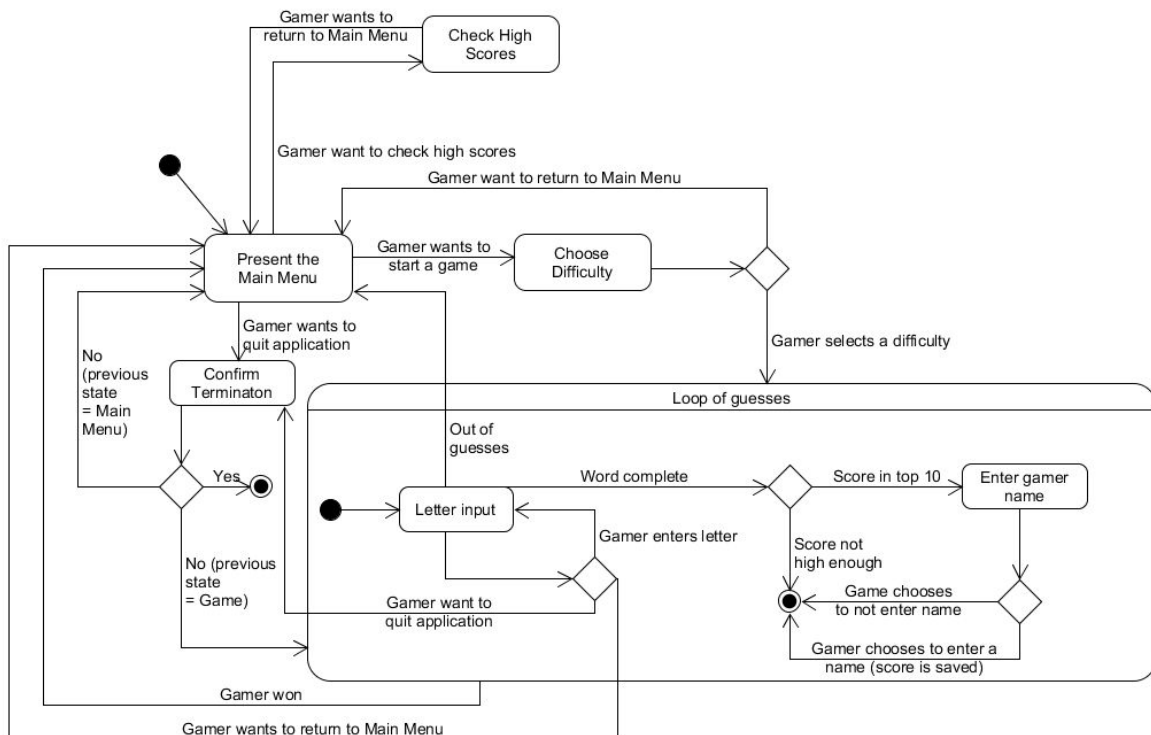
Alternative scenarios

- 3.1 The Gamer makes an incorrect guess.
 1. The system displays a 'incorrect' message and displays the hangman figure with an additional part.
- 3.2 The Gamer chooses to go back to Main Menu.
 1. Goto Use Case 1, step 2.
- 3.3 The Gamer chooses to Quit the application.
 1. Goto Use Case 3.

State Machine diagram(play game)



State Machine diagram (extended)



Class diagram

