Linnéuniversitetet, software technology

Project Hangman

Assignment 2

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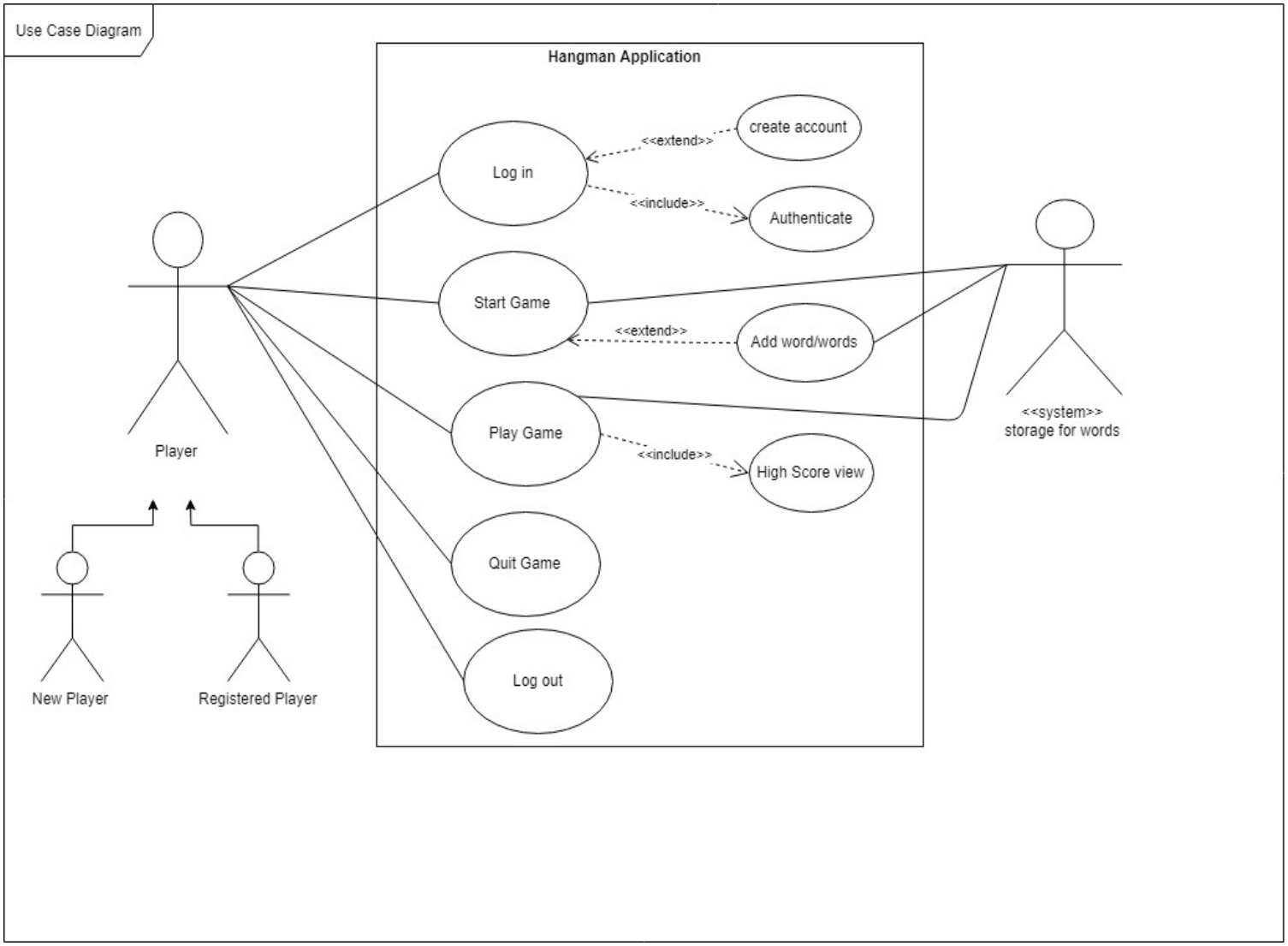
Content

1 | Use Case Diagram



2 | Fully dressed Use Cases

2.1 UC 1 Start Game

Precondition: none.

Postcondition: the game menu is shown.

Main scenario

1. Starts when the player wants to begin a session of the hangman game.
2. The system presents the main menu with a title, the option to play and quit the game.
3. The player makes the choice to start the game.
4. The system starts the game (see Use Case 2).

Alternative scenarios

3.1 The player makes the choice to quit the game.

1. The system quits the game (see Use Case 4)

4.1 Invalid menu choice

1. The system presents an error message.
2. Go to step 2

2.2 UC 2 Play Game

Precondition: The game is started.

Postcondition: The game presents option to see high score list (see UC 3).

Main scenario

1. Starts when the player has started the game.
2. The system presents a representation of the word to be guessed.
3. The system prompts the player for a letter.
4. The player guesses the right letter.
5. The system presents the letter at the right position/positions.
6. The system prompts the player for a letter.
7. The player guesses the right last letter.
8. The system declares a win for the player.
9. The system presents option to see high score list (see Use Case 3).

Alternative scenarios

4.1 The player guesses the wrong letter.

1. The system draws a part of the picture of the hanged man.
2. Go to step 6.

7.1 The player guesses the last guess wrong

1. The system declares game over.
2. Go to step 9.

2.3 UC 3 High Score

Precondition: The player has played a round of hangman (UC 2)

Postcondition: The system presents the high score list.

Main scenario

1. Starts when the player has played a round of hangman (UC 2)
2. The system prompts the user if the high score list should be displayed.
3. The player accepts.
4. The system displays the list of high scores.
5. The player terminates the list.
6. The system presents the main menu (see UC 1 step 2)

Alternative scenarios

3.1 The user denies

1. Go to step 6.

2.4 UC 4 Quite Game

Precondition: The game is running.

Postcondition: The game is terminated.

Main scenario

1. Starts when the player wants to quit the game.
2. The system prompts for confirmation.
3. The player confirms.
4. The system terminates.

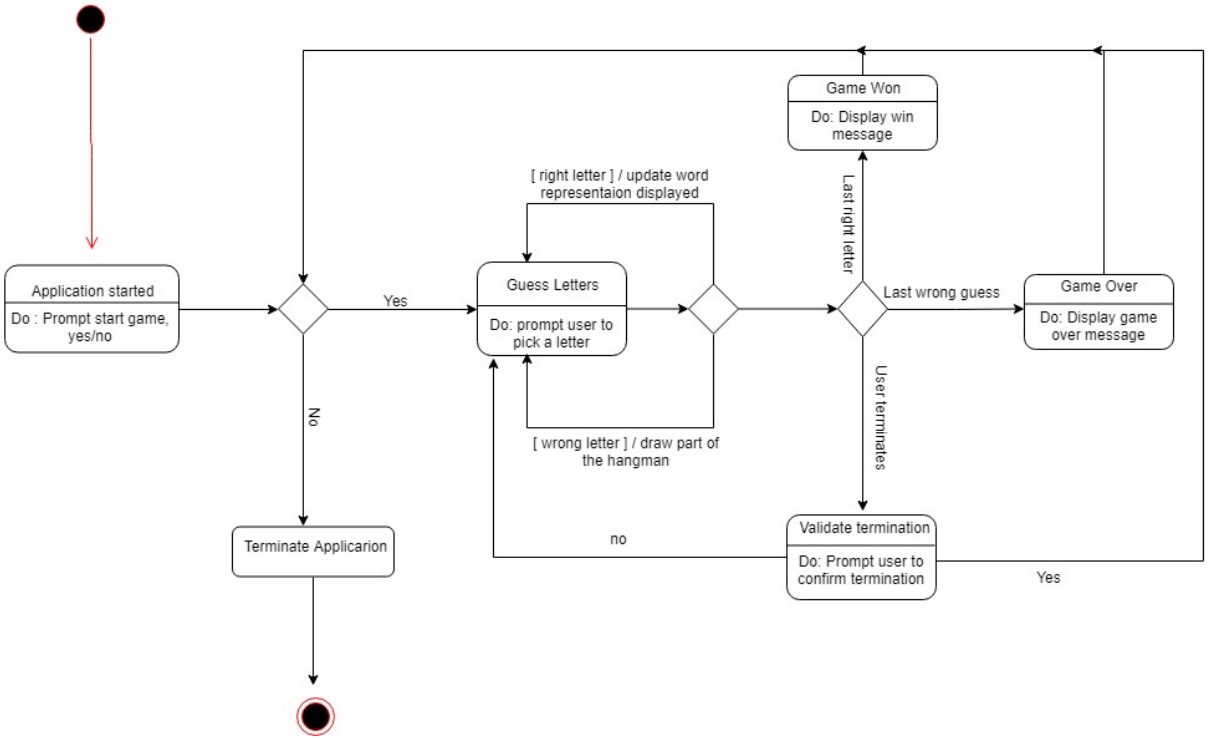
Alternative scenarios

3.1. The player does not confirm

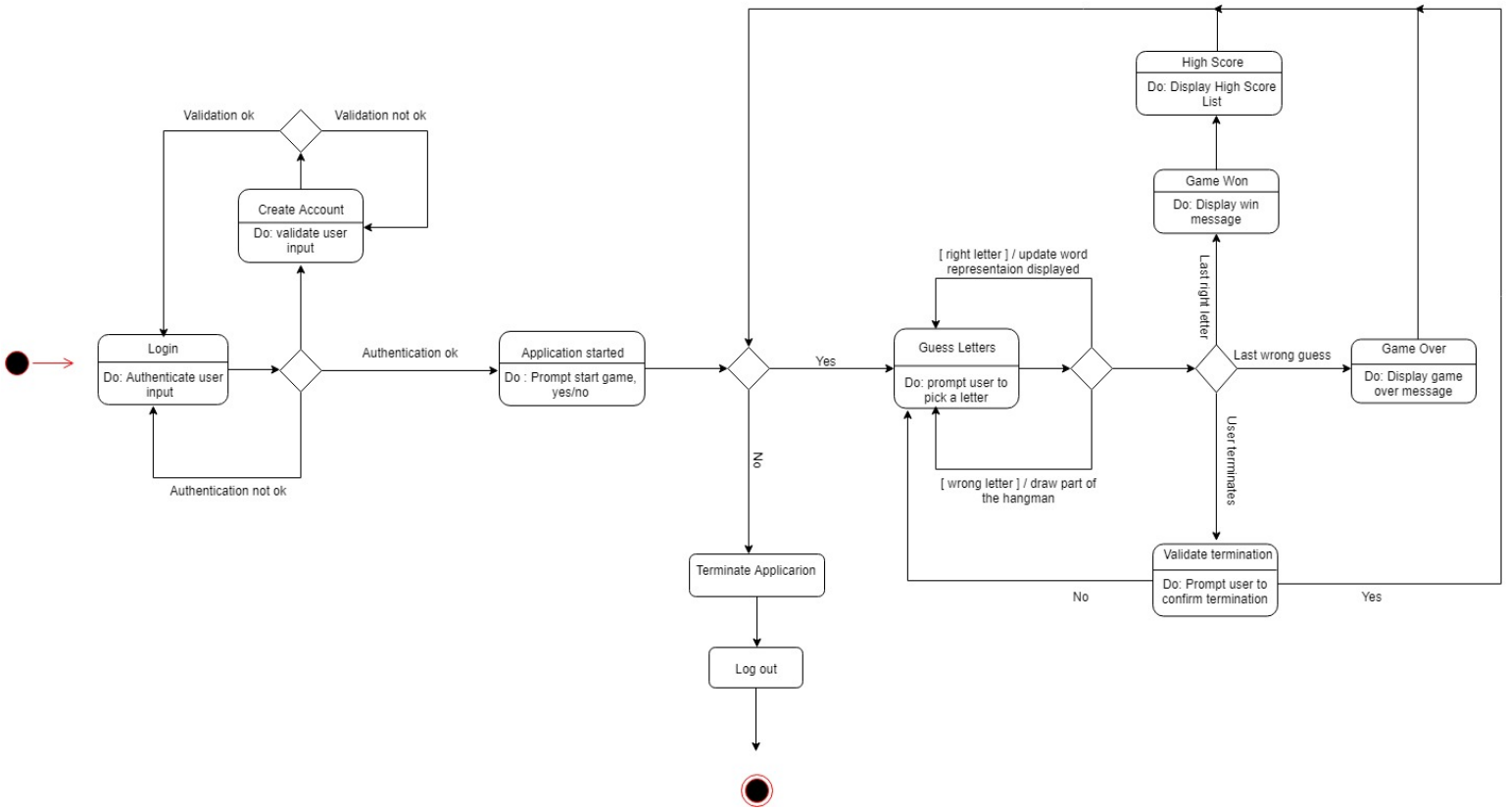
1. The system returns to its previous state

3 | State Machine Diagram

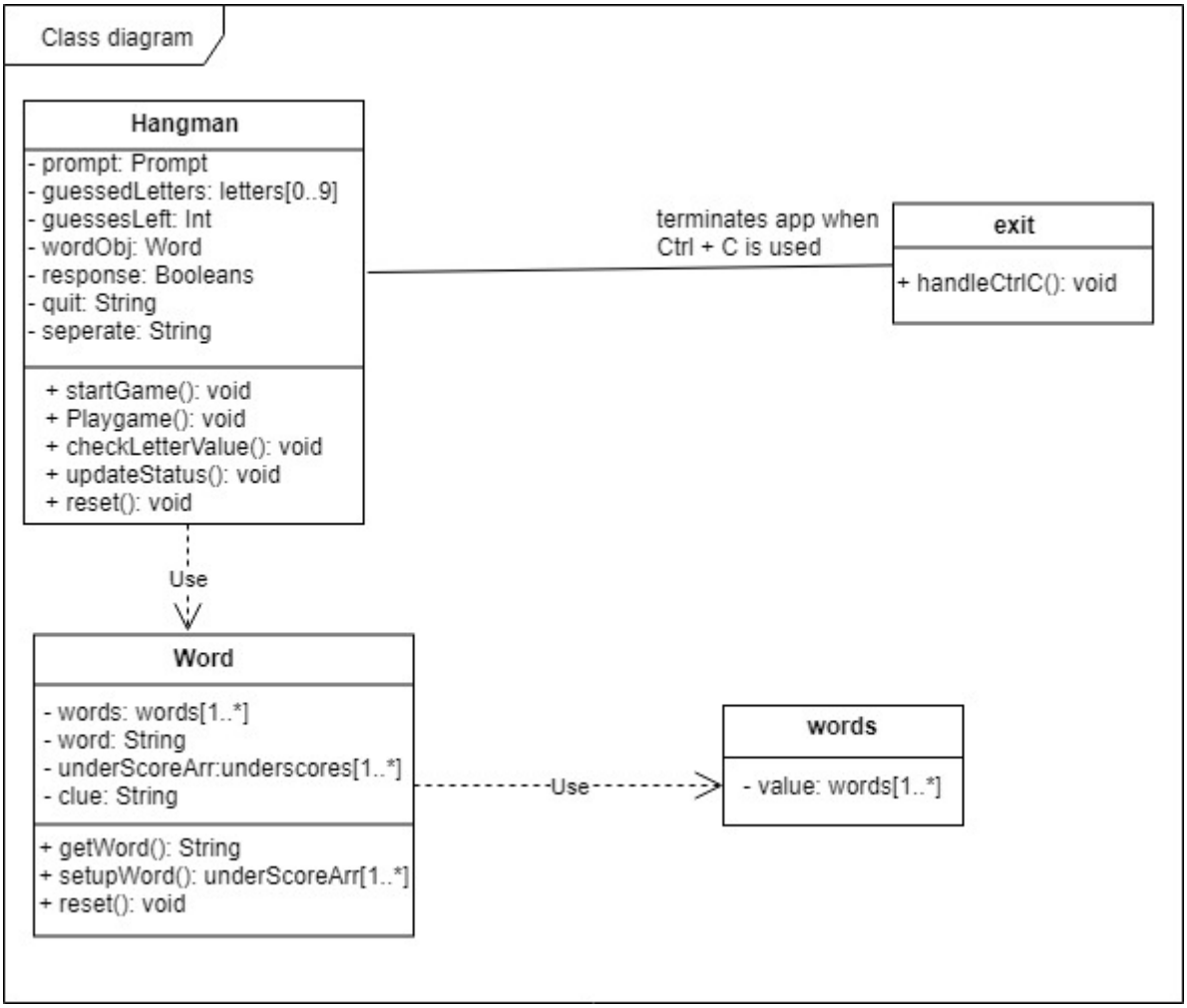
3.1 Basic State Machine



3.2 Extended State Machine



4 | Class Diagram



5 | Time log

5.1 Time log table

Task	Time estimate	Actual time
1. Time log, Estimates.	40 min	30 min
2. Read chapters in Software engineering (4,5,6,7,15,20)	12h	15 h
3. Watch pre recorded lectures.	7 h + 8 min.	7 h + 8 min
4. Create use case diagram	3 h	2 h
5. Create fully dressed use case for play game.	3 h	3 h
6. Create basic State Machine diagram.	4 h	3 h + 45 min
7. Implement code for a basic hangman game.	10 h	14 h
8. Create a class diagram.	4 h	3 h
9. Update project plan documents	1 h	45 min
10. Make an extended version of the fully dressed use case.	3 h	2h
11. Make an extended version of the State Machine diagram.	3 h	1 h + 30 min

5.2 Time log Analyse

Iteration 2

The time log for the second iteration is better than the one for the first iteration. The estimates are often closer to the actual time but there is still room for improvement. The implementation took a bit longer than expected mostly due to a misunderstanding of the requirements and the reading also took a bit longer than expected. That means more time should be estimated to those tasks while time could be subtracted from tasks like the extended versions of the diagrams.