Hangman Project

Iteration 2

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Contents

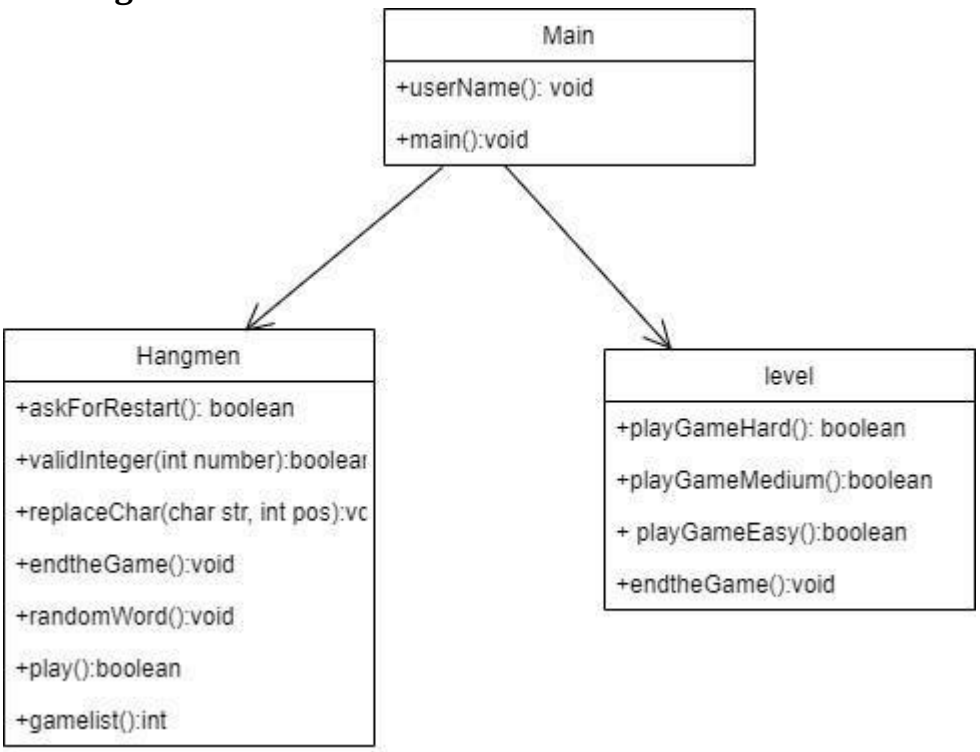
Revision History

Date	Version	Description	Author
2022	**1.0**	**Software Design** **(**UML diagrams, Modelling, playable**)**	Yetnayet Belachew

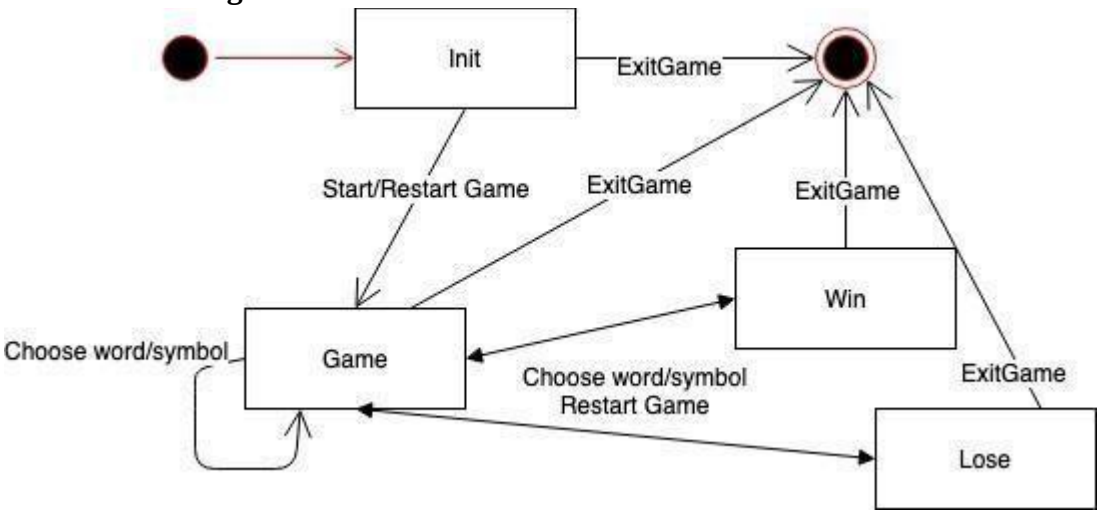
Iteration 2

The concept of this iteration is a playable version of the Hangman game at the end of this iteration. The player will be welcomed and asked to enter his/her username to start the game and choose the levels of the game which are easy (7 attempts) for the player to guess the missing letter, medium (5 attempts) and finally hard (3 attempts). Then player will be able also to choose a list of categories such as Countries name by pressing number 3 and Car brands by pressing number 4. Next step user will be guessing the missing letter when the user runs out of attempts and without guessing the correct word, he/she will lose and hangman picture will be displayed, but if the user guessed the correct word before running out of attempts user will win. The user will be given in the final menu two options to choose 1 to restart the game or 2 to exit the game. If the user chose the first option which is to restart the game and play again, the user will go again to the game level and continue the same steps that I mentioned before, but if the user chose option 2 which is exit the game, the game will be quit.

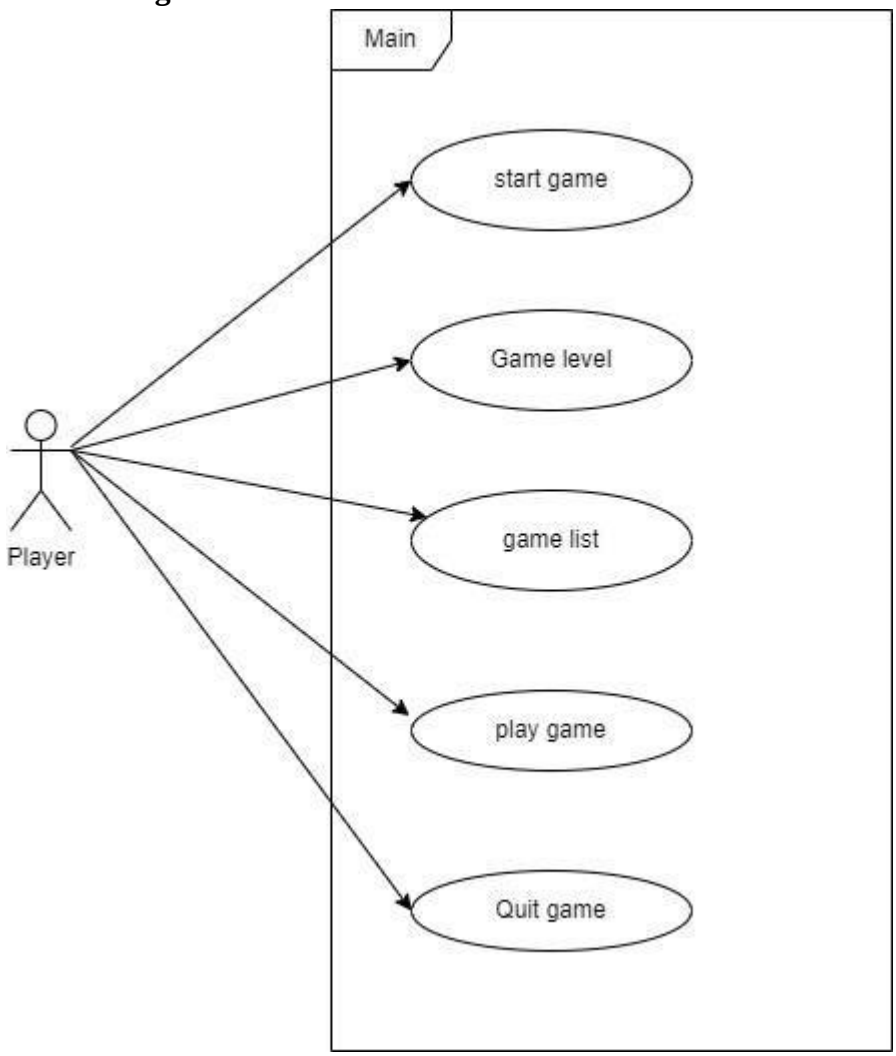
Class diagram



State Machine Diagram



Use Case Diagram



Use Case UC1: Starting game
Primary Actor: User plays the game. Stakeholders:
- User: Who wants to play a game session.
- Developer: who wants to provide the user with a good experience.

Precondition: None
Post conditions: The game menu will display.

Main scenario:
1. The program will begin when the user has entered an input as a name.
2. The user enters his username.
3. The game will show the user a menu to choose from options.

4. The welcome message is played.
5. The user Chooses the level (see UC2 below).

Extensions:
The player chooses to exit. Game
will end

Use Case UC2: Game level

Primary Actor: User plays the game. Stakeholders:

- User: Who wants to play a game session.
- Developer: who wants to provide the user with a good experience.

Precondition: UC1
Post condition: The player will get different attempts based on the chosen level.

Main scenario:
1. The user selects level, which may be suitable for him by click 1 to play easy, 2 to play medium, and 3 to play hard level. 2. The user will enter a number between 1 and 3.
3. Go to use case3

Extension:
Users will choose to quit the game. The game will end.

Use Case UC3: Game List

Primary Actor: User plays the game. Stakeholders:
- **User:** Who wants to play a game session.
- **Developer:** who wants to provide the user with a good experience. Precondition: UC2
- **Postcondition**: The user will guess a word based on the chosen category.

Main scenario:

1. The user selects which kind of categories of a word he/she wants to guess (3. Countries name, 4. Car brands).
2. Users choose 3 or 4 to continue the game. Go to UC4

Extensions:
1. The player chooses to leave the game.
The game will end.

Use Case UC4: Playing a game

Primary Actor: User plays the game. Stakeholders: - **User:**
Who wants to play a game session.
- **Developer:** who wants to provide the user with a good experience.

Precondition: UC3
Post conditions: Results will be displayed.
Main scenario:
1. The user starts guessing and tries to guess the right letter to get the missing word.
2. Users will guess the right letters and win.
3. Go to UC5,

Extensions:
1. The user starts guessing and tries to guess the right letter to get the missing word.
2. Users will run out of attempts and losses.
3. A hangman picture will be displayed.
4. Go to UC5.

Use Case UC5: Quit the game

Primary Actor: User plays the game. Stakeholders:
- User: Who wants to play a game session.
- Developer: who wants to provide the user with a good experience
Precondition: UC4
Post conditions: The game will end.

Main scenario:
1. The user will be directed to the final menu where the user has two options to choose from (1. Restart 2. Exit).
2. The user will Choose 2 to quit the game. Game ends.

Extensions:
1. Users choose 1 to restart the game.
Go to UC1

Time log

Revision History	10m	10m	
Iteration	15m	15m	
State-machine	1h	1h 15m	It took more time for me because I was new on UML diagrams and Modelling.
Case diagram	30h	30h	
Use Case diagram	2h	2h	
Codes	13h	16h	It took more time to figure out how to start writing the code
Dress Use cases	2h	3h	It took more time for me because I was new on UML diagram and Modelling
Total	18h 55m	22h 55m	

Handing in

All assignments have some files to hand in. The overall advice is to keep it simple. Make it easy for the receiver to understand what the files are by using descriptive file names. Use as few separate documents as possible. Always provide a context, that does not send some diagrams in "graphics format", but always in a document where you provide the purpose and meaning of the diagrams. Remember that the "receiver" is a customer and as such has very little knowledge of the diagrams and documents – always provide context that makes anything you hand in understandable to a nontechnical person.

To hand in an assignment, make a git release and hand in the link via Moodle to that release.