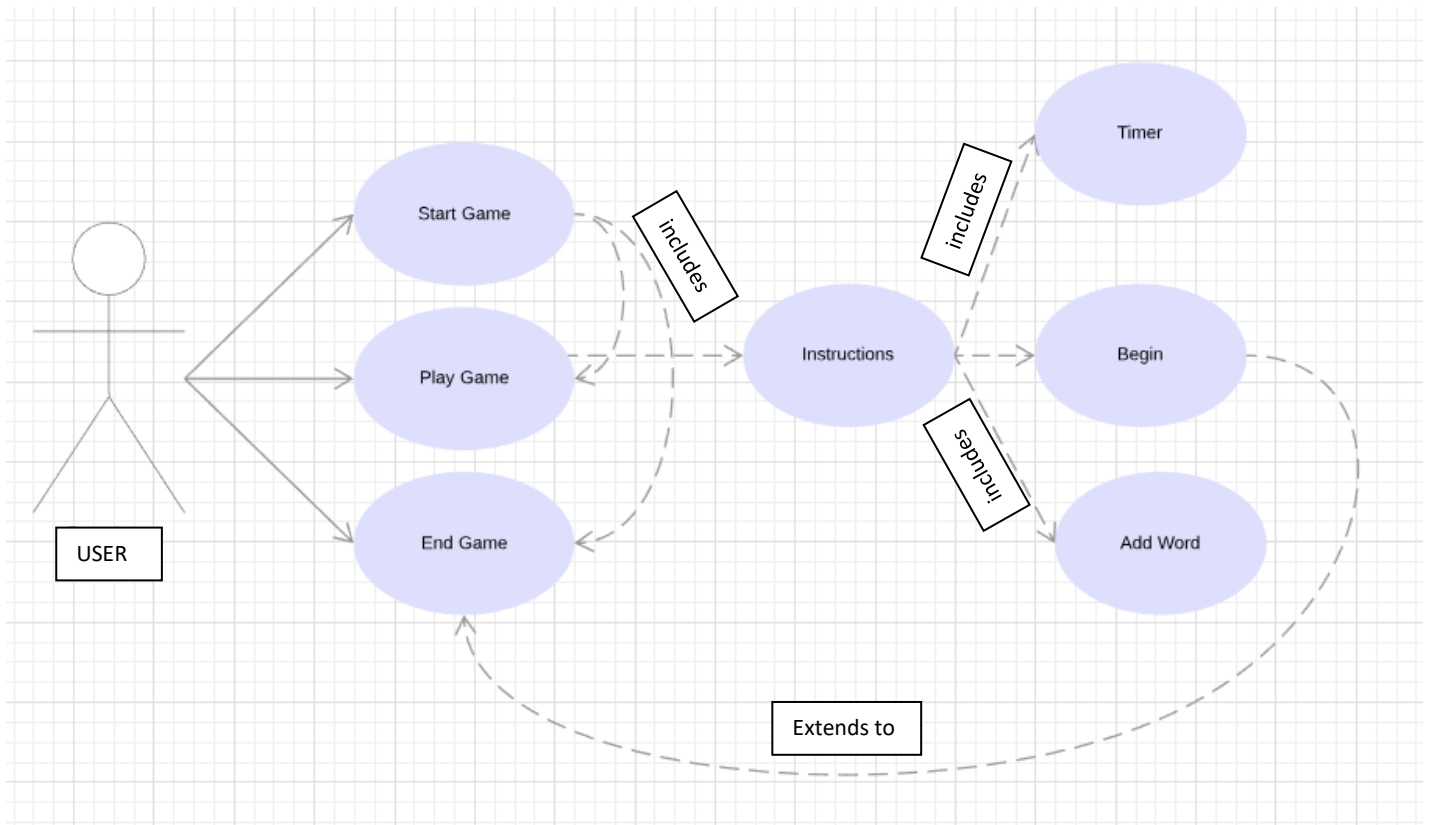


1DV600

# Assignment 2

Bhavya Shukla  
2-22-2019

# USE CASE DIAGRAM



# USE CASE

## UC 1 Start Game

Precondition: none.

Postcondition: the game menu is shown.

### Main scenario

1. Starts when the user 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 Gamer makes the choice to start the game.
4. The system starts the game (see Use Case 3).

*Repeat from step 2*

### Alternative scenarios

3.1 The Gamer makes the choice to quit the game.

1. The system quits the game (see Use Case 2)

4.1 Invalid menu choice

1. The system presents an error message.

## UC 2 Quit Game

Precondition: The game is running.

Postcondition: The game is terminated.

### Main scenario

1. Starts when the user wants to quit the game.
2. The system presents the options to play or quit.
3. The user selects to quit game.
4. The system terminates.

### **Alternative scenarios**

3.1 The Gamer makes the choice to play the game.

1. The system continues the game (see Use Case 1)

4.1 Gamer chooses to play

1. The system continues the game. (see Use Case 1)

## **UC 3 Play Game**

Precondition: The user wants to play

Postcondition: The user is given 3 options

### **Main scenario**

1. Starts when the user wants to begin a session of the hangman game.
2. The system presents the instructions screen for how to play the game.
3. The Gamer chooses ok and continues the game.
4. The system offers the user 3 options (see Use Case 4,5,6)

### **Alternative scenarios**

3.1 Invalid menu choice

1. The system presents an error message.

## **UC 4 Timer**

Precondition: user wants to add timer to game

Postcondition: the game has a timer

### **Main scenario**

1. Starts when the user wants to play with a timer.
2. The system will turn on the timer when the game begins and user is sent back to screen with options of timer, begin and add word.

## **Alternative scenarios**

1.1 The Gamer makes the choice to not play with a timer.

1. The system does not start timer.

## **UC 5 Add word**

Precondition: The user wants to add a word

Postcondition: Word is added to word list

### **Main scenario**

3. Starts when the user wants to add a word to the hangman game.
4. The system asks user to enter a 6 letter word.
5. The Gamer enters the word.
6. The word is added to word list and user is sent back to screen with options of timer, begin and add word.

## **Alternative scenarios**

3.1 Word entered is not 6 letters.

2. The system asks user to re-enter the word.

## **UC 6 Begin**

Precondition: The user wants to begin playing hangman

Postcondition: User has finished playing

### **Main scenario**

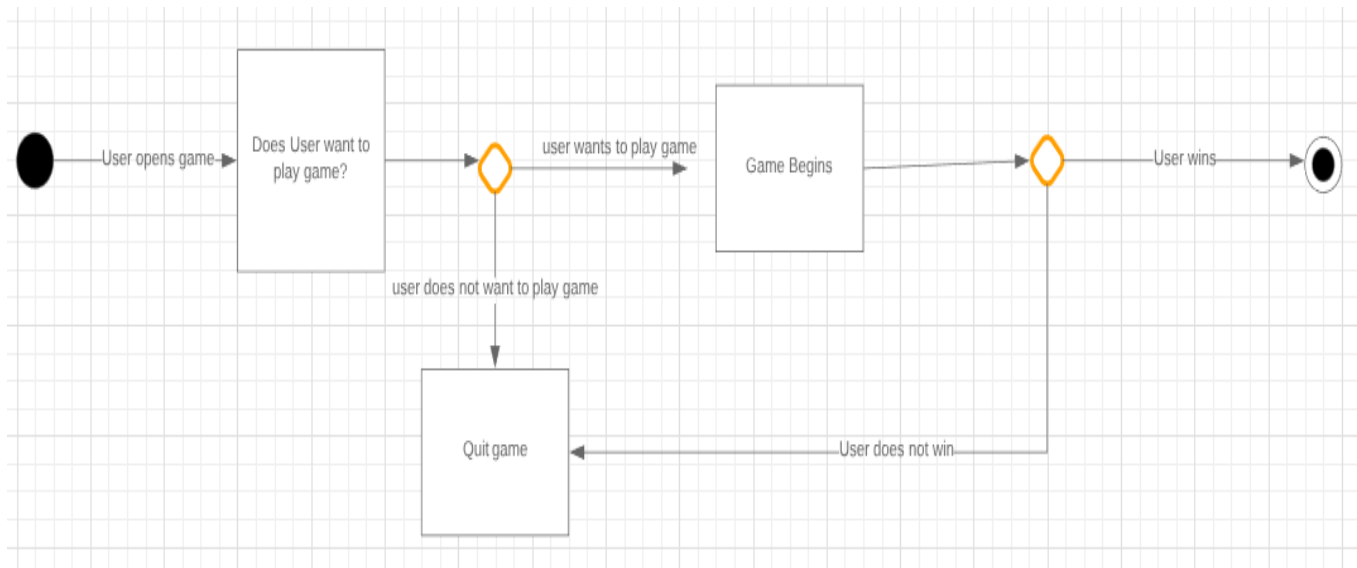
1. Starts when the user wants to begin playing hangman.
2. The system shows how many guesses are left, the number of guesses used and same number of blanks as length of word.
3. The Gamer guesses a letter.
4. The letter replaces a blank if it is correct. System shows number of guesses left and number of guesses used.
5. Step 4 continues until the user wins, a congratulations message is displayed and user quits the game.

### **Alternative scenarios**

5.1 Step 4 stops after number of guesses left reaches zero and user does guess the complete word.

1. A please try again message is shown along with the correct word and user quits the game.

# STATE MACHINE DIAGRAM



# IMPLEMENTATION

```
WELCOME TO A GAME OF HANGMAN!
```

```
TO PLAY GAME PRESS Y  
PRESS ANY OTHER KEY TO EXIT
```

```
y  
HOW TO PLAY GAME:  
A RANDOM 6 LETTER WORD HAS BEEN CHOSEN.  
YOU HAVE 8 TRIES TO GUESS THE WORD.  
YOU CAN ONLY GUESS 1 LETTER OF THE WORD AT A TIME.  
IF THE LETTER IS CORRECT, IT WILL REPLACE THE BLANK SPACE  
WITH THE POSITION OF THAT LETTER IN THE WORD.  
PRESS OK TO BEGIN
```

```
ok
```

```
-----  
Number of Guesses left: 8  
Number of Guesses used: 0
```

```
_ _ _ _ _  
Enter your Guess letter:
```

```
a  
Number of Guesses left: 7  
Number of Guesses used: 1  
a _ _ _ _  
Enter your Guess letter:
```

```
p  
Number of Guesses left: 6  
Number of Guesses used: 2  
a p p _ _  
Enter your Guess letter:
```

```
l  
Number of Guesses left: 5
```

```
a  
Number of Guesses left: 7  
Number of Guesses used: 1
```

```
a _ _ _ _  
Enter your Guess letter:
```

```
p  
Number of Guesses left: 6  
Number of Guesses used: 2  
a p p _ _  
Enter your Guess letter:
```

```
l  
Number of Guesses left: 5  
Number of Guesses used: 3  
a p p l _  
Enter your Guess letter:
```

```
e  
Time taken: 10.0 seconds  
CONGRATULATIONS!  
Correct word is apple  
Number of Guesses left: 4  
Number of Guesses used: 4  
THANK YOU FOR PLAYING!  
HOPE TO SEE YOU AGAIN!
```

```
-----  
e  
Number of Guesses left: 3  
Number of Guesses used: 5  
a _ _ _ e  
Enter your Guess letter:
```

```
f  
Number of Guesses left: 2  
Number of Guesses used: 6  
a _ _ _ e  
Enter your Guess letter:
```

```
g  
Number of Guesses left: 1  
Number of Guesses used: 7  
a _ _ _ e  
Enter your Guess letter:
```

```
h  
PLEASE TRY AGAIN  
Number of guesses left has reached 0  
Correct word is apple  
THANK YOU FOR PLAYING!
```

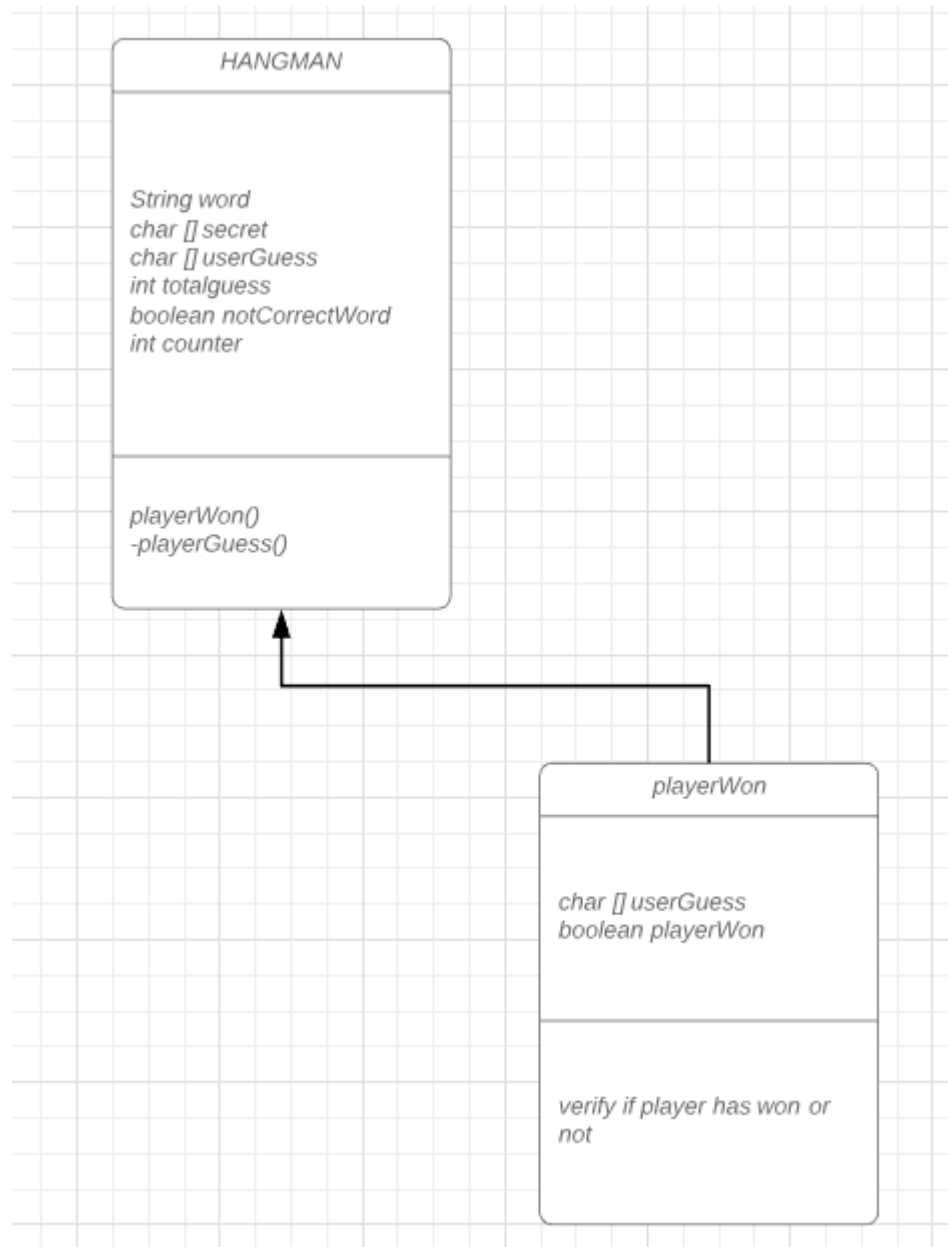
```
WELCOME TO A GAME OF HANGMAN!
```

```
TO PLAY GAME PRESS Y  
PRESS ANY OTHER KEY TO EXIT
```

```
a  
GOODBYE, HOPE TO SEE YOU AGAIN!
```



# CLASS DIAGRAM



# TIME LOG

TASK	ESTIMATED TIME	TIME TAKEN
Assignment 2	10 days	14 days
First implementation	5 days	4 days
Highscore	3 days	5 days
Add word	4 days	7 days