

Informatics Institute of Technology

Department of Computing

ECSC410: Software Development Principles 01

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Acknowledgement

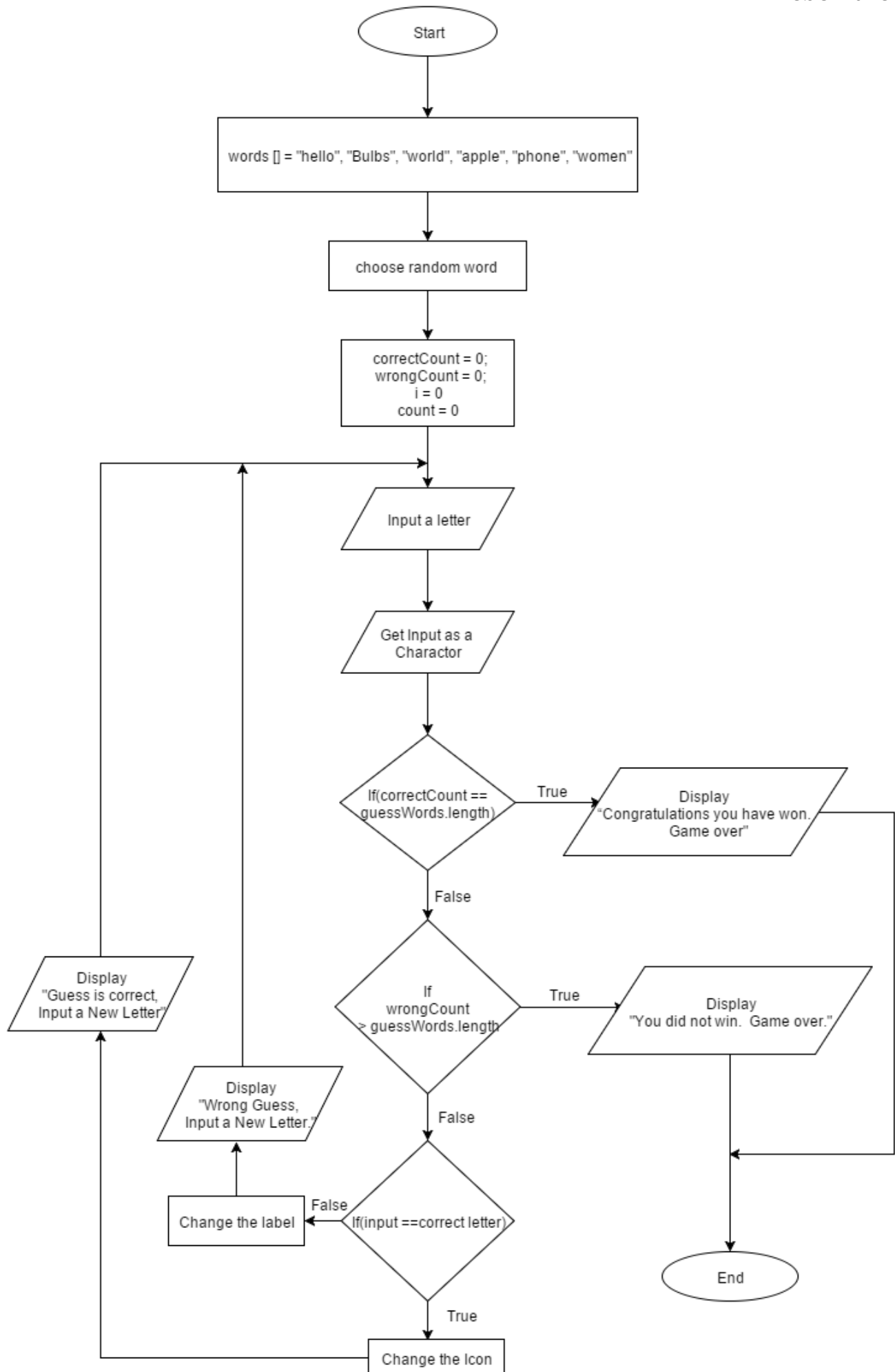
I like to thank our Software Development Principles module leaders, Mr. Guganathan Poravi, Mrs. Aloka Fernando for providing us with the knowledge and guiding us through; to complete this project. We can say firmly with zero doubt that this project has immensely helped us to improve our knowledge regarding the subject.

Introduction

This project called Hangman game. There will be a program to guess a word. User needs to guess a letter by letter. If the guess is correct game will continue. If the guess is incorrect hangman image will be shown part by part. Very firstly I designed flowcharts and pseudo codes to meet the given requirements. Then tested the coding.

This project was done by Pasindu Purna Uduwila Arachchi (2014038)

Design



Pseudo Codes

WordGameApplication

Set words [] = "hello", "bulbs", "world", "apple", "phone", "women"

Set correctcount = 0

Set wrongcount = 0

Get random word

Prompt for a letter

Set char[] value = new char[5]

Set i = 0

While(i < guessWords.length) do

 value = guessWords

End While

Set count = 0

Get Input from textInput

While(i < guessWords.length) do

 (value[i] = guessWords.charAt(i))

 IF (input == value[i])Then

 Switch

 Case 0 : Display input in labelOne

 Case 1 : Display input in labelTwo

 Case 2 : Display input in labelThree

 Case 3 : Display input in labelFour

 Case 4 : Display input in labelFive

 ELSE

 count++

 END IF

End While

```
IF(count == guessWords.length)Then
    Display wrongcount in lablelcount
    Display "Wrong Guess, Input a New Letter" in textMessage
ELSE
    Display "Guess is correct, Input a New Letter" in textMessage
END IF

IF(correctCount == guessWords.length)Then
    Display "Congratulations you have won. Game over" in textMessage
END IF

IF (wrongCount == 1)Then
    Set icon of btnHangman to hangMan-01
ELSEIF (wrongCount == 2)Then
    Set icon of btnHangman to hangMan-02
ELSEIF (wrongCount == 3)Then
    Set icon of btnHangman to hangMan-03

ELSEIF (wrongCount == 4)Then
    Set icon of btnHangman to hangMan-04
ELSEIF (wrongCount == 5)Then
    Set icon of btnHangman to hangMan-05
ELSEIF (wrongCount == 6)Then
    Set icon of btnHangman to hangMan-06
    Display "You did not win. Game over." in textMessage
ENDIF
ENDIF
ENDIF
ENDIF
ENDIF
```

Source Code

```

/**
 *
 * @author Pasindu Purna
 */
String[] words = {"hello", "bulbs", "world", "apple", "phone", "women"};
int random = (int) (Math.random() * 6);
public int correctCount = 0;
public int wrongCount = 0;
public String guessWords = words[random];

private void btnTryActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
    char[] value = new char[5]; //creating a char array
    for (int i = 0; i < guessWords.length(); i++) {
        value[i] = guessWords.charAt(i);
    }
    try{
        char input = txtInput.getText().toLowerCase().charAt(0); //Converting the input to
lowercase
        int count = 0;
        //Using a for loop linear search of the words to guess
        for (int i = 0; i < guessWords.length(); i++) {
            if (input == value[i]) {
                //switch case
                switch (i) {
                    case 0:
                        lblOne.setText(input + "");
                        break;
                    case 1:
                        lblTwo.setText(input + "");
                        break;
                    case 2:
                        lblThree.setText(input + "");
                        break;
                    case 3:
                        lblFour.setText(input + "");
                        break;
                    case 4:
                        lblFive.setText(input + "");
                        break;
                }
                correctCount++; //Incrementing
            } else {
                count++;
            }
        }
    }
}

```



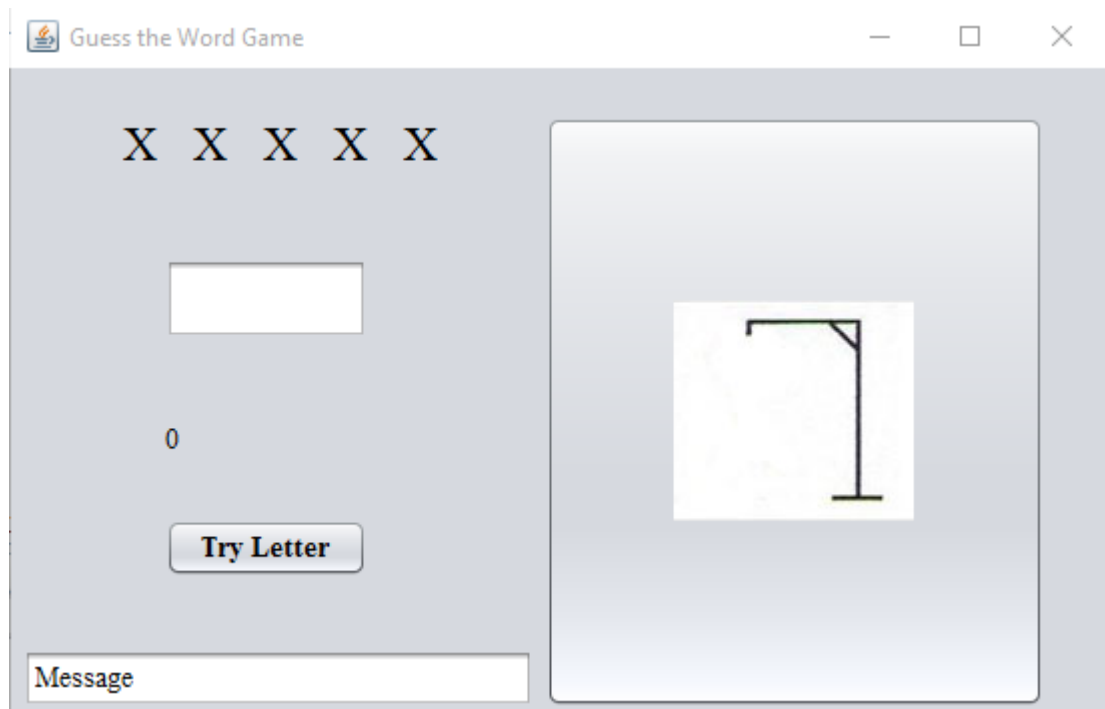
```

if (count == guessWords.length()) {
    count = 0;
    wrongCount++;
    lblCount.setText(wrongCount + "");
    txtMessage.setText("Wrong Guess, Input a New Letter");
} else {
    txtMessage.setText("Guess is correct, Input a New Letter");
}
if (correctCount == guessWords.length()) {
    txtMessage.setText("Congratulations you have won. Game over");
}
}
txtInput.setText("");
} catch (Exception e) {
    txtMessage.setText("Input a Letter");
}

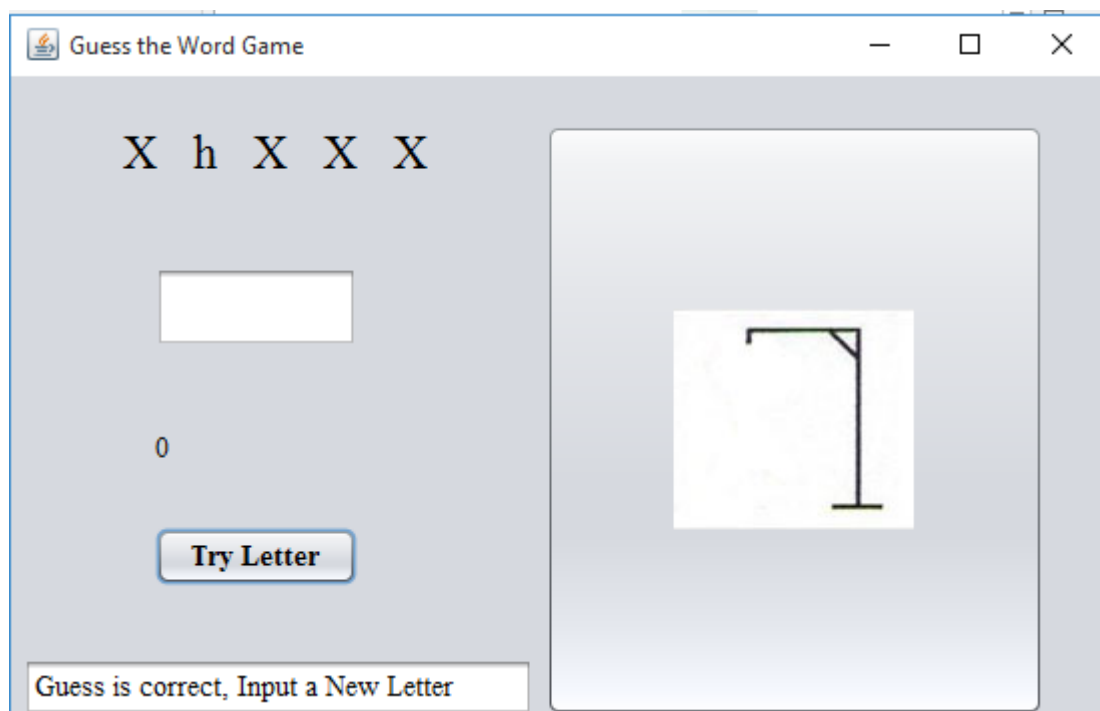
//Set ImageIcon
if (wrongCount == 1) {
    btnHangman.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Project_01/HangMan-01.jpg")));
} else if (wrongCount == 2) {
    btnHangman.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Project_01/HangMan-02.jpg")));
} else if (wrongCount == 3) {
    btnHangman.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Project_01/HangMan-03.jpg")));
} else if (wrongCount == 4) {
    btnHangman.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Project_01/HangMan-04.jpg")));
} else if (wrongCount == 5) {
    btnHangman.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Project_01/HangMan-05.jpg")));
} else if (wrongCount == 6) {
    txtMessage.setText("You did not win. Game over.");
    btnHangman.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Project_01/HangMan-06.jpg")));
}
}

```

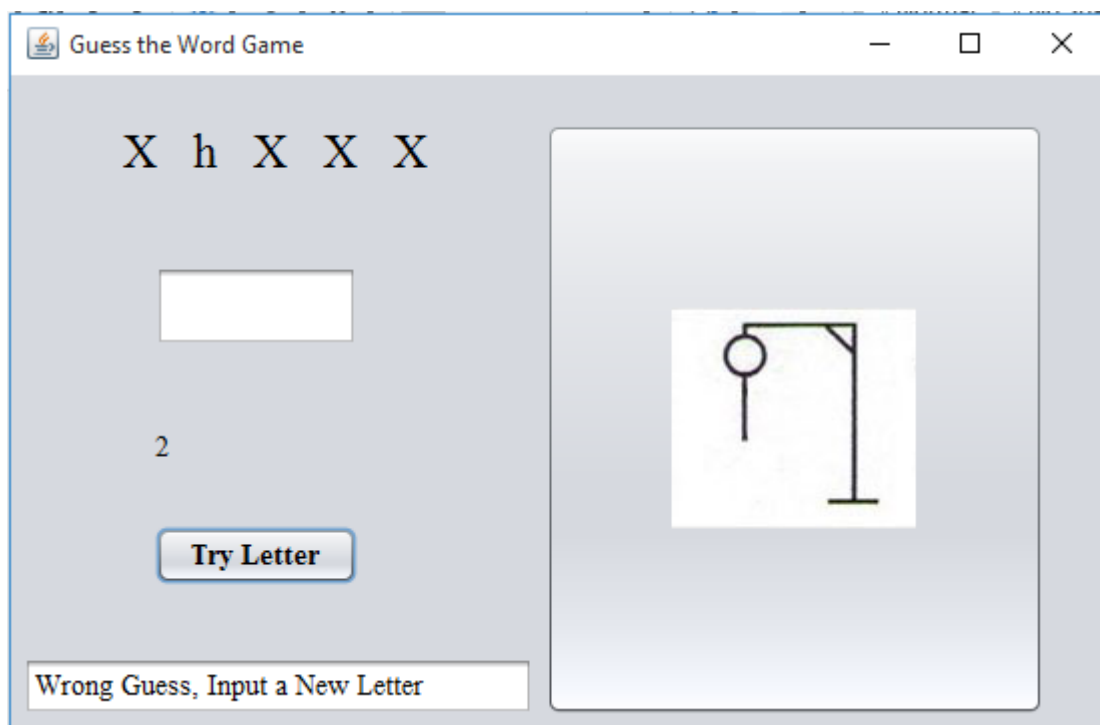
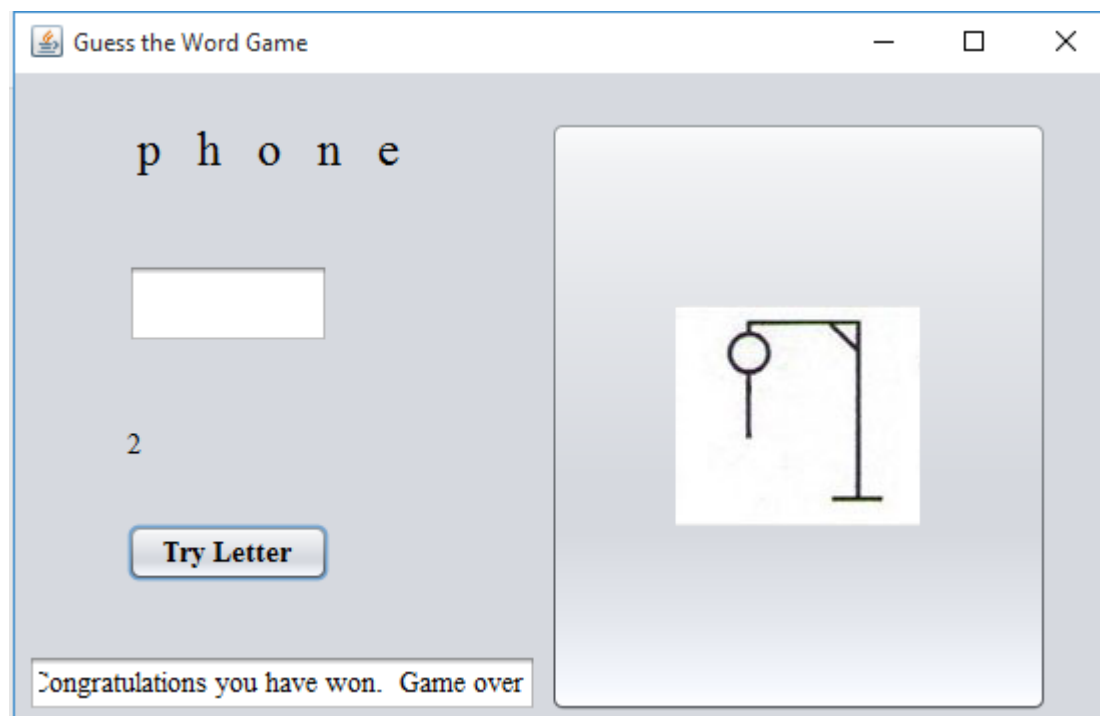
Screen Shots

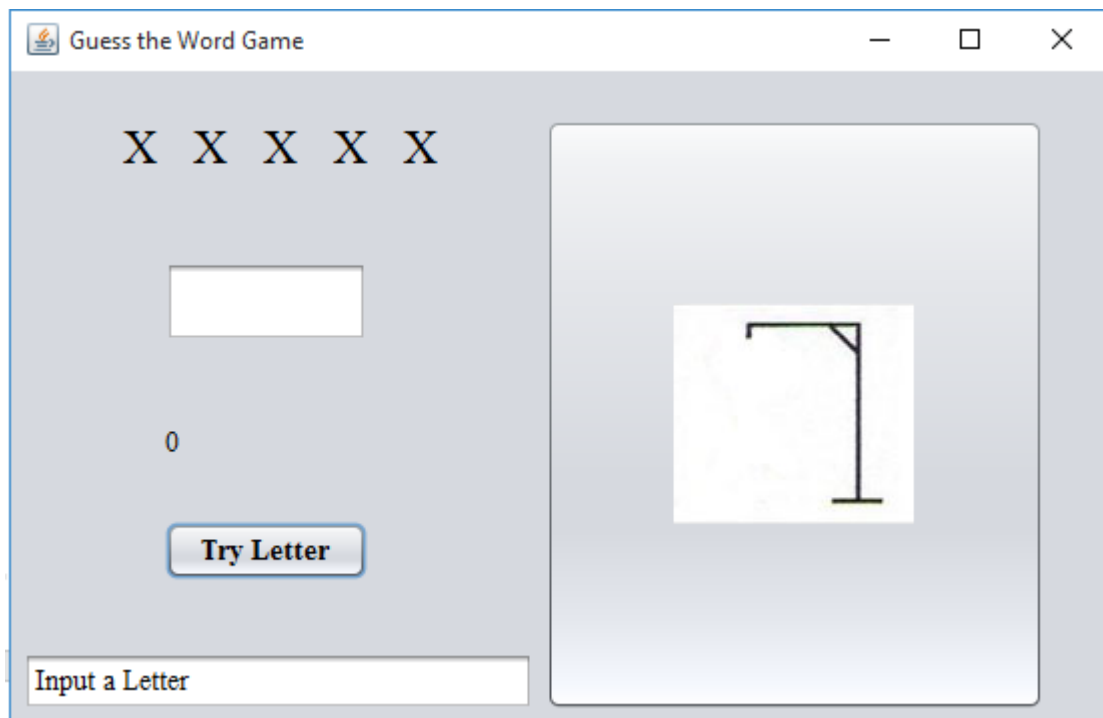
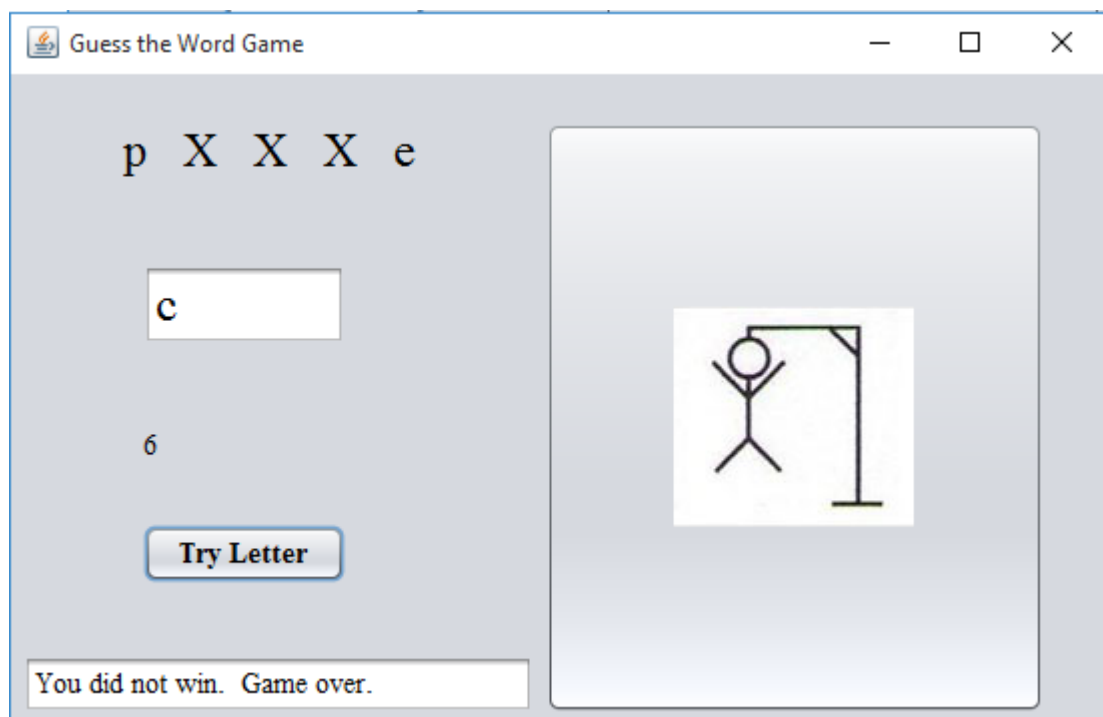


Screenshot 1.1



Screenshot 1.2

*Screenshot 1.3**Screenshot 1.4*

*Screenshot 1.5**Screenshot 1.6*

Conclusion

This project has given us the knowledge in how to implement some of the basic functions in the Java language and also has taught us how to analyze a given specification, design GUI, drawing flow charts, build pseudo code, code a program in advance, test a program & fix bugs.

As well as after doing this it increased our knowledge to how to work on Netbeans, our logical thinking & improved our technical skills.