

THE HANGMAN

CS112
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Project Proposal

This Program will be the classic Hangman game.

It will read in a file of words and choose one randomly.

After everything is ready it'll ask the user to guess the word letter by letter.

With each wrong guess a part of man's body will be drawn.

If the user was able to guesses the chosen word before guessing 6 wrong letters, she/he wins and the man is free!

Elsewise, the user loses and a sad face will be drawn for man's face.

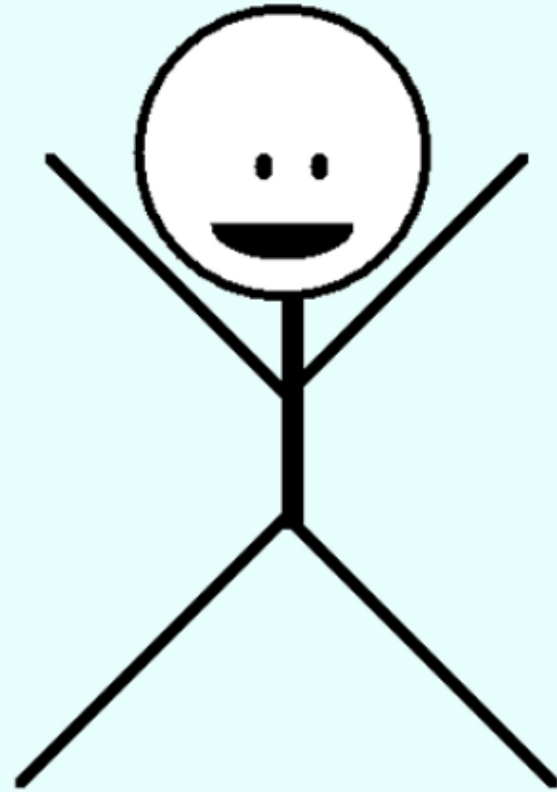
Implementation

There was a lot of planning and thinking before starting to make the game.

There was a lot of things that came up that was not a part of the plan.

The whole game was made in one week





DEMO
TIME

Inheritance/Polymorphism

```
public class HangmanJFrame extends JFrame
```

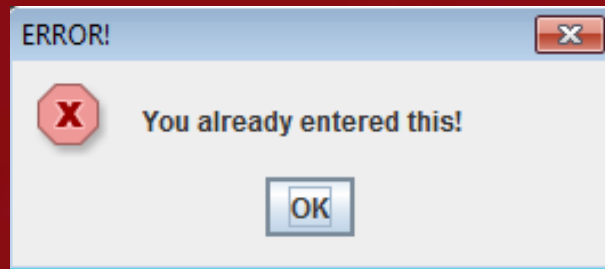
```
public class HangmanDrawerPanel extends JPanel
```

```
public class EmptyInputException extends Exception
```

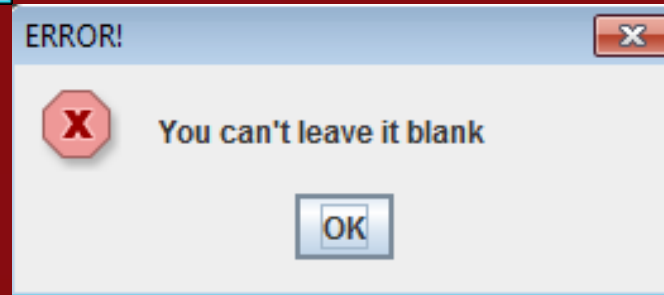
```
public class AlreadyEnteredException extends Exception
```

```
public class BadInputException extends Exception
```

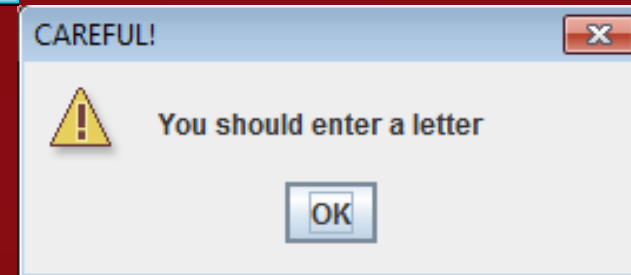
Exception Handling



----> In case of any repeated letters



In case of numbers or symbols <---



Text File I/O

```
//DESCRIPTION: Reads words from file and puts them into words array
//PRECONDITION: Instant variables must be initialized
//POSTCONDITION: Reads words from file and puts them into words array
public void readWords()
{
    Scanner inputStream;

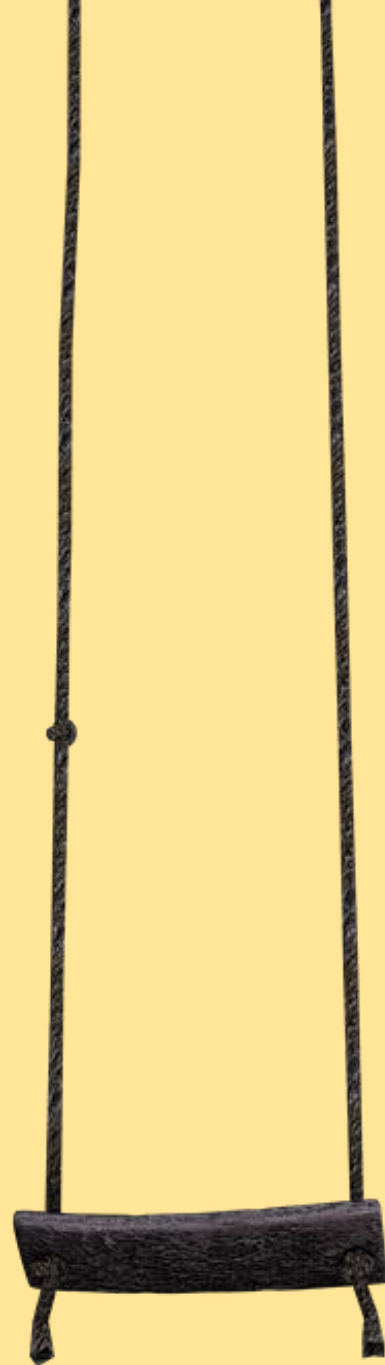
    int size;
    try
    {
        inputStream = new Scanner(new FileInputStream(DEFAULT_FILE_NAME));
        size = inputStream.nextInt();
        inputStream.nextLine();
        words = new String[size];
        for(int i=0; i < size; i++)
        {
            String h;
            h=inputStream.nextLine().trim().toUpperCase();
            words[i] = h;
        }
        System.out.println("Done getting word from file.");
        inputStream.close();
        wordOfGame = getRandomWord(words);
    }
    catch(FileNotFoundException fnfe)
    {
        System.out.println("Error: File " + DEFAULT_FILE_NAME +
                           " not found or could not be opened.");
        System.exit(0);
    }
}
```

ArrayList

```
import java.util.ArrayList;
import javax.swing.JOptionPane;
import javax.swing.ImageIcon;
public class HangmanTester
{
    private static ArrayList<Character> listOfGuesses = new ArrayList<Character>(10);
    public static void main (String args[])
    {
        Hangman person = new Hangman();
        HangmanJFrame game = new HangmanJFrame(person);
        game.setVisible(true);
        boolean gameEnds = false, wantsToPlayAgain = true;
        while (wantsToPlayAgain)
        {
            System.out.println(gameEnds);
            while (!gameEnds)
            {
                char guess = getInputFromPlayer();
                String mistake = person.updateGuess(guess);
                listOfGuesses.add(guess);
                game.updateGuessPanel(mistake);
                game.updateGraphics();
                gameEnds = person.weHaveAWinner() || person.weHaveALooser();
                person.getMistake();
            }
        }
    }
}
```


Swing

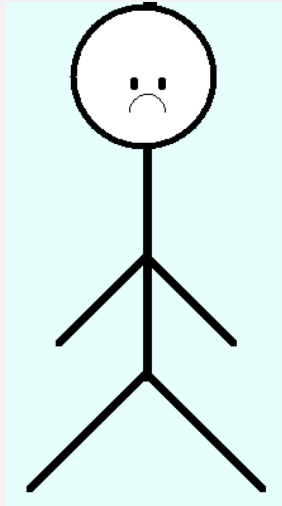
- On my JFrame class:
 - `import javax.swing.JFrame;`
 - `import javax.swing.JPanel;`
 - `import javax.swing.JLabel;`
 - `import javax.swing.JTextArea;`
 - `import javax.swing.JTextField;`
 - `import javax.swing.JOptionPane;`
 - `import javax.swing.ImageIcon;`



Graphics

- To draw Hangman (example: when lose)

- drawBody(g);
- drawSadLeftHand(g);
- drawSadRightHand(g);
- drawLeftLeg(g);
- drawRightLeg(g);
- drawSad(g);



- Font:

```
@Override
public void paintComponent(Graphics g)
{
    super.paintComponent(g);
    g.setColor(Color.BLACK);
    int x,y;
    x = this.getWidth();
    y = this.getHeight();
    g.setColor(Color.BLACK);
    g.setFont(font);
    if(!givenString.equals(""))
    {
        g.drawString(givenString, x/3-(x/4), y/2);
    }
    else
    {
        givenString = "Cannot find String";
    }
}
```

Future Developments

- Adding a feature for recording scores
- Making my hangman dance for win or give it a funny face and dead for lose.
- Can completely be replaced with different pictures for each mistake.
- Can be turned to an app.
- Can add a hint option for the user