

# **Software Design Report**

## **Part 1- Identify the Problem or Need**

- I am addressing a method made using Java Graphics.
- I will be trying to design a program that will allow the user to play the game “hangman”.
- This game is meant for two players. There is no age restriction for the game, therefore anyone can play this game.
- My goal is to make this game using Java Graphics. I have not learned much about Java Graphics, so I want to test my skills and apply all my skills in order to accomplish this game.
- The requirement for this game would be to understand using a JFrame, JPanel and many more things in the Java Graphics class. I will also be using my skills on photoshop in order to make all the photos and icons used throughout the game.
- The main limitation is the amount of time we have, if we had more time, we would be able to add and test a lot more things. The other limitation is due the amount of experience I have in Computer Science, but I will always try and challenge myself and pass those limitations and reach my max capacity.
- The skills needed include, Java Basics, Methods, Arrays, and most importantly Java Graphics which will be making up most of my program.
- I am familiar and can work with all skills needed to make this project except Java Graphics. I will watch YouTube videos and ask my teacher and peers to get familiar with Java Graphics.

## **Part 2 – Research and Brainstorm (Before you start building!)**

- I can use Java API, Java references, my Teacher and peers to help me with a problem.
- Arrays, Object Orientation, Java Graphics, Java Basics

## **Part 3 – Plan (Before you start coding!)**

- January 7 (Read over the assignment and start the report by answers all the small questions and timeline)

- January 8-10 (plan out the program, making sure it's not too easy yet not too hard)
- January 11-12 (start with the main game screen, see if there is anything, I am having problems with)
- January 13 (try to get help and fix my problems, also getting a lot more familiar with Java Graphics)
- January 14-15 (finish up all the code)
- January 17 (look over the code, clean it up and fix and small problems)
- January 18-19 (Finish the report)

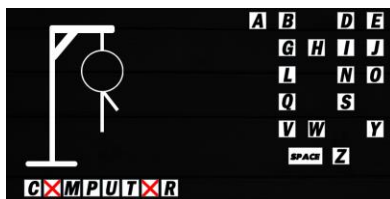
## Part 4 – Create



**Title Screen.** Press the " Play Game" button to continue



**Enter Word Screen.** One of the two players will type in a word for the other player to guess. After they type it in, they must press the " Enter" button to continue.



**Guessing Screen.** This screen is where all the guessing happens. You click on the letter buttons to choose the letter. You have a total of eight lives, you lose a life every time you guess a wrong letter.



**Result Screen.** This is the win screen, there also is a lose screen if you lose. To play again you just click on the " Play Again" button.

## Part 5 – Test and Improve

- The program works, it has no problems while running.
- The main aspect of the game works, the only things I can't figure out is how to reset what is inside the textbox once restarted, a thing I can improve is having a single player mode where the computer choses a word instead of another player.
- The main problems that I came across was figuring out if the letter chosen was in the actual word, I spent some time on it and figured it out, I also had a problem resetting all of the variables which I also figured out.
- I added a restart button, I added win and lose “music / sounds”, I added background music, and button clicking sounds. I also condensed some of my code to make it simpler and easier to read.