**System-Level Requirements**

1. The system shall provide a means for the user to start the game.

2. The system shall provide a means for the user to quit the game.

3. The upper bound shall be 1024.

4. The system shall display the guessable range (1 – 1023)

5. The system shall provide a means for User to inform the device that he/she has selected a number between 1 and 1,023.

6. The system shall be able to find the number in 10 guesses or less

7. The system shall have a way to determine what guess it is on.

8. The system shall be able to receive feedback from the user:

· The guess is correct.

· The guess is too high

· The guess is too low.

9. The system shall be able to determine the next number to guess.

10. The system shall be able to store the last number that it guessed.

11. The system shall be able to display the number guessed

12. The system shall have a way to end the game once either the guessed number is correct or the maximum guess count is reached.

**Extra Credit:**

1. A means for the user to set the upper bound

2. Use binomial theorem to log base 2 to determine number of guesses, round up to whole number if log is a decimal