IDT Short Term Project 1 (Design a guessing game) Description

Students will work in small groups to design a number guessing game. The app will allow one user to enter a number and a second user to try to guess the number.

Standards

IT-PGA-2 Describe the software application life cycle and use a prototype development model to develop applications.
IT-PGA-4 Design, develop, and implement accessible and usable interfaces, and analyze applications for engaging the user.

Business Ethics

Students will model work readiness traits required for success in the workplace including teamwork, multitasking, integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Expectations

Students are expected to use the skills and concepts learned in the course to design a working guessing game.

Objectives

Students will design a game in MIT AppInventor.

The user needs to be able to:

Guess a number

Text box to enter the number guessed

Button to input the number

Receive feedback to adjust their guesses

Feedback label that prompts the user to guess higher or lower

Feedback label that tells the user how many guesses are left

Feedback label that lets the user know whether they won or lost

Control over game conditions

Text box to enter the number the player is trying to guess

Button to input the number the player is trying to guess

A way to limit the number of guesses

Reset/play again button

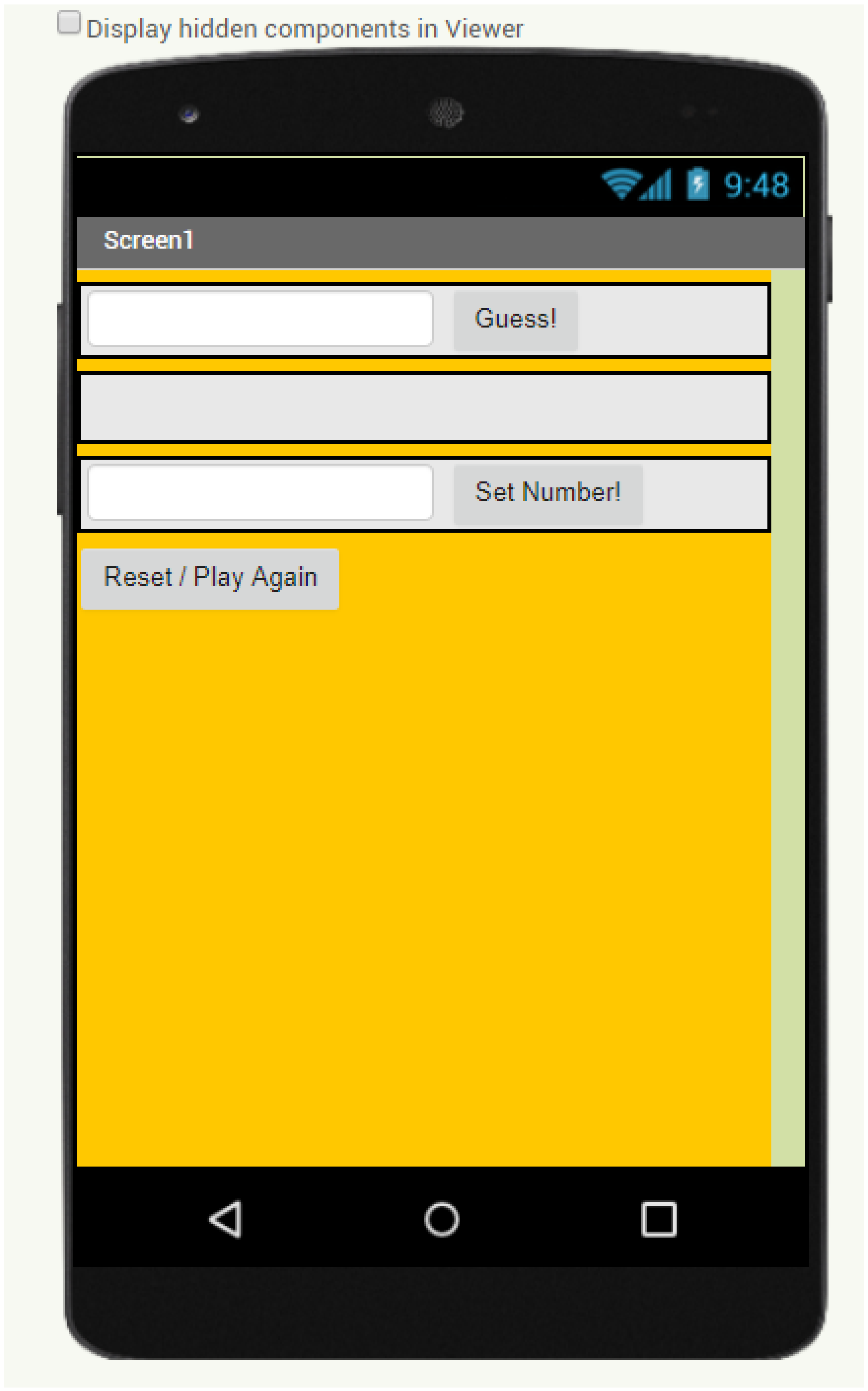
Project Time

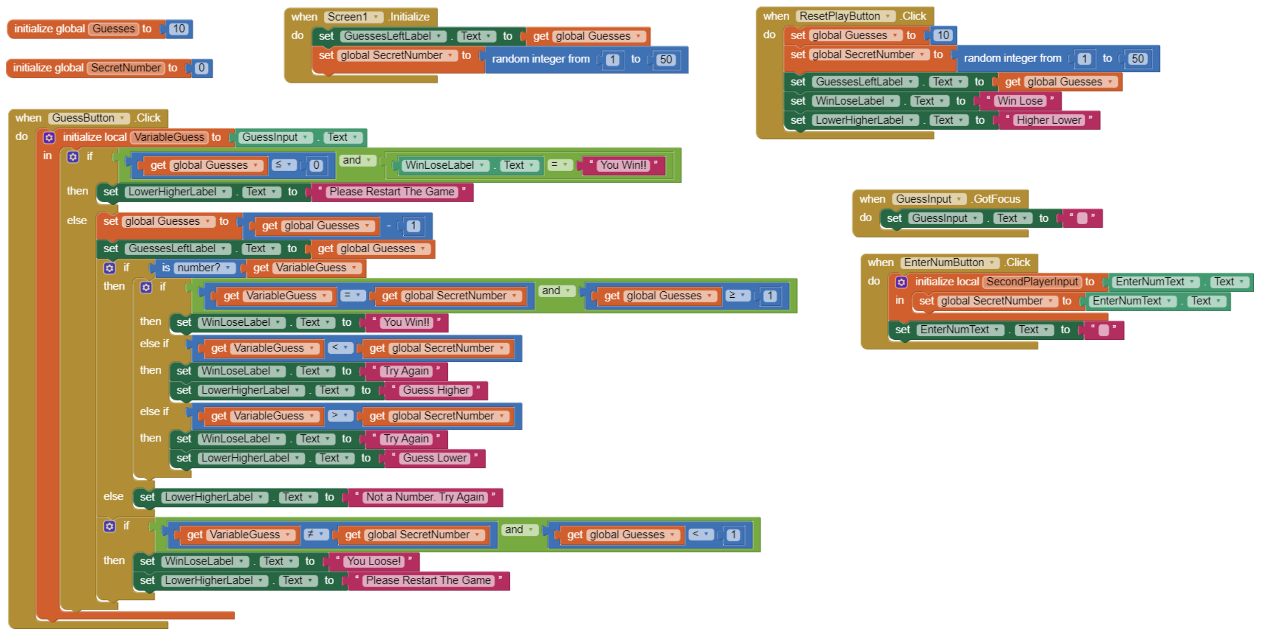
The project will take approximately 5 hours to complete.

Rubric

50 points Game functions with all the features listed in objectives
25 points Game interface is intuitive and easy to use
25 points There are no errors when the game is run

Benjamin C.


Display hidden components in Viewer
9:48
Screen1
Guess!
Set Number!
Reset / Play Again



```
initialize global Guesses to 10

initialize global SecretNumber to 0

when Screen1 .Initialize
do  set GuessesLeftLabel . Text to get global Guesses
    set global SecretNumber to random integer from 1 to 50

when ResetPlayButton .Click
do  set global Guesses to 10
    set global SecretNumber to random integer from 1 to 50
    set GuessesLeftLabel . Text to get global Guesses
    set WinLoseLabel . Text to " Win Lose "
    set LowerHigherLabel . Text to " Higher Lower "

when GuessButton .Click
do  initialize local VariableGuess to GuessInput . Text
    in  if    get global Guesses ≤ 0 and WinLoseLabel . Text = " You Win!! "
        then  set LowerHigherLabel . Text to " Please Restart The Game "
        else  set global Guesses to get global Guesses - 1
              set GuessesLeftLabel . Text to get global Guesses
              if    is number? get VariableGuess
              then  if       get VariableGuess = get global SecretNumber and get global Guesses ≥ 1
                    then     set WinLoseLabel . Text to " You Win!! "
                    else if  get VariableGuess < get global SecretNumber
                    then     set WinLoseLabel . Text to " Try Again "
                             set LowerHigherLabel . Text to " Guess Higher "
                    else if  get VariableGuess > get global SecretNumber
                    then     set WinLoseLabel . Text to " Try Again "
                             set LowerHigherLabel . Text to " Guess Lower "
              else  set LowerHigherLabel . Text to " Not a Number. Try Again "
              if    get VariableGuess ≠ get global SecretNumber and get global Guesses < 1
              then  set WinLoseLabel . Text to " You Loose! "
                    set LowerHigherLabel . Text to " Please Restart The Game "

when GuessInput .GotFocus
do  set GuessInput . Text to "  "

when EnterNumButton .Click
do  initialize local SecondPlayerInput to EnterNumText . Text
    in  set global SecretNumber to EnterNumText . Text
    set EnterNumText . Text to "  "
```

Good job, Ben.

50 points Game functions with all the features listed in objectives   - 50

25 points Game interface is intuitive and easy to use - 25

25 points There are no errors when the game is run – 25

Total Earned - 100