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# ICS 4U1
# Python Number Guessing Game Project

#Import random module for use in the program and determining a random
number
import random

#Introduce user to the game
print("\nWelcome to the number guessing game!\n")

#While loop to run until the user decides a viable difficulty to play on
while True:
    #Give the user options to pick for a difficulty for the game
    difficulty = input("\nWhat difficulty would you like to play on?
\n\tEasy: Range 1 to 5 \n\tMedium: Range 1 to 10 \n\tHard: Range 1 to 100
\n\tImpossible: Range 1 to 1000 \n\n").upper()

    #Execute if the difficulty entered is easy
    if difficulty == "EASY":
        maximum = 5
        print("\n{}? You got this easily!".format(difficulty))
        break

    #Execute if the difficulty entered is medium
    elif difficulty == "MEDIUM":
        maximum = 10
        print("\n{}? Safe choice, have fun!".format(difficulty))
        break

    #Execute if the difficulty entered is hard
    elif difficulty == "HARD":
        maximum = 100
        print("\n{}? Alright good luck!".format(difficulty))
        break

    #Execute if the difficulty entered is impossible
    elif difficulty == "IMPOSSIBLE":
        maximum = 1000
        print("\n{}? WHAT WERE YOU THINKING? You'll be here
forever!".format(difficulty))
        break

    #Execute if the difficulty entered is not one of the listen options
    else:
        print("\nyou have to put in one of the difficulty levels, ex.
Easy, Medium")
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#Set a random number in the selected range difficulty for the user to
guess
number = random.randint(1,maximum)

#Initialize by setting guess to something outside of the selected number
range to the while loop can start
guess = 0

#Initialize a variable to keep track of how many guesses the user used
guess_count = 0

#While loop to determine if the guessed number is correct or incorrect
while (guess != number):
    #Try-except that will handle the error if the user enters a value that
is not a integer
    try:
        guess = int(input("\nGuess a Number: "))
    except ValueError:
        print("\nYou must enter a number LOL")
        continue

    #Checking if the guess number is less than or greater than the random
number, then outputing the corresponding response
    if guess < number:
        print("\nThe number is higher, try again!")
    elif guess > number:
        print("\nThe number is lower, try again!")
    guess_count+=1

#Output a "you win" message after the while loop, as the only way to exit
is by winning, then the program ends
print("You guessed correct in {} guesses, you win!".format(guess_count))
```