VISVESVARAYA TECHNOLOGICAL UNIVERSITY
Belagavi

A Report On

"Number guessing game"

Submitted in partial fulfillment for Mini Project Assignment
In

"Application Development using Python (18CS55)"

of

BACHELOR OF ENGINEERING

In

COMPUTER SCIENCE AND ENGINEERING

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ABSTRACT

In the number guessing game, the user selects a number within a defined range and then the program guesses the number. If the number guessed is wrong then the user tells the program that is the actual number is greater than the guessed number or not. Similarly, the program again guesses the number until the actual number is not guessed.

INTRODUCTION

One of the simplest two-player games is "Guess the number". The first player thinks of a secret number in some known range while the second player attempts to guess the number. After each guess, the first player answers either "Higher", "Lower" or "Correct!" depending on whether the secret number is higher, lower or equal to the guess. In this project, you will build a simple interactive program in Python where the computer will take the role of the first player while you play as the second player. You will interact with your program using an input field and several buttons. For this project, we will ignore the canvas and print the computer's responses in the console. Building an initial version of your project that prints information in the console is a development strategy that you should use in later projects as well. Focusing on getting the logic of the program correct before trying to make it display the information in some "nice" way on the canvas usually saves lots of time since debugging logic errors in graphical output can be tricky.

IMPLEMENTATION

```python
import random
import math
print("Enter the numbers in between you would like to guess the number")

lower = int(input("Enter Lowest number:- "))

upper = int(input("Enter Highest number:- "))

x = random.randint(lower, upper)
print("\n\tYou've only ",
        round(math.log(upper - lower + 1, 2)),
        " chances to guess the integer!\n")

count = 0

while count < math.log(upper - lower + 1, 2):
        count += 1
        guess = int(input("Guess a number:- "))

        if x == guess:
                print("Congratulations you did it in ",
                        count, " try")
                break
        elif x > guess:
```

```python
            print("You guessed too small!")
        elif x < guess:
            print("You Guessed too high!")


if count >= math.log(upper - lower + 1, 2):
        print("\nThe number is %d" % x)
        print("\tBetter Luck Next time!")
```

RESULT

```
Enter the numbers in between you would like to guess the number
Enter Lowest number:- 1
Enter Highest number:- 500

        You've only  9  chances to guess the integer!

Guess a number:- 250
You Guessed too high!
Guess a number:- 200
You Guessed too high!
Guess a number:- 150
You Guessed too high!
Guess a number:- 125
You Guessed too high!
Guess a number:- 100
You Guessed too high!
Guess a number:- 50
You Guessed too high!
Guess a number:- 25
You guessed too small!
Guess a number:- 40
You guessed too small!
Guess a number:- 45
You Guessed too high!

The number is 41
        Better Luck Next time!
```

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