## TASK 2 Implement conditional, control and looping statements

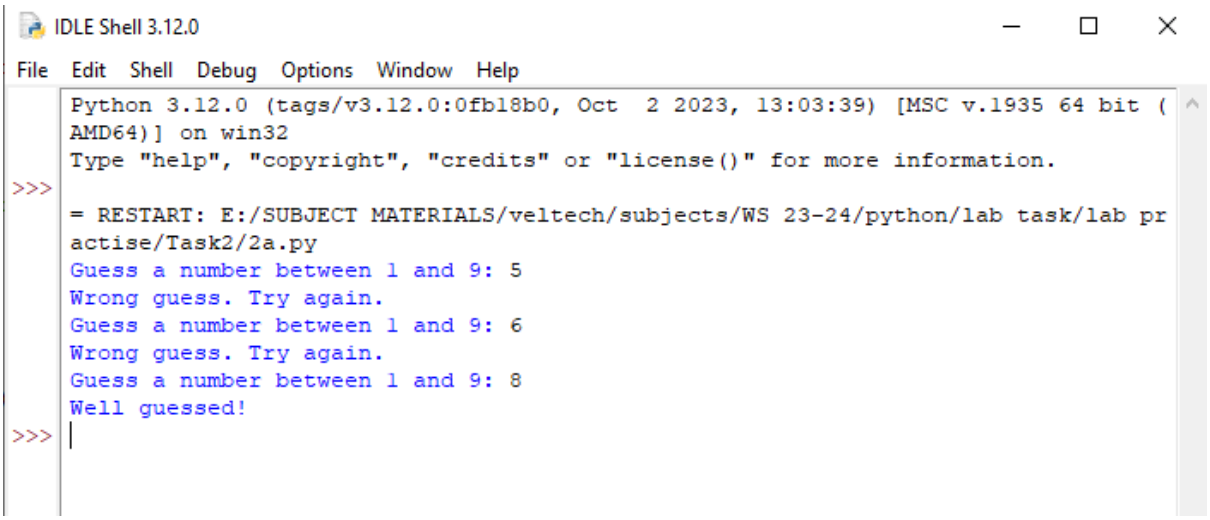
### Problem 1:

User is prompted to enter a guess. If the user guesses wrong then the prompt appears again until the guess is correct, on successful guess, user will get a "Well guessed!" message, and the program will exit. Write a Python program to guess a number between 1 to 9.

### PROGRAM:

```
import random

def guess_number():

    # Generate a random number between 1 and 9

    target_number = random.randint(1, 9)


    while True:

        # Prompt the user to enter a guess

        user_guess = int(input("Guess a number between 1 and 9: "))


        # Check if the guess is correct

        if user_guess == target_number:

            print("Well guessed!")

            break

        else:

            print("Wrong guess. Try again.")


# Call the function

guess_number()
```

### OUTPUT



**Problem 2:**

Build a solution for the problem which iterates the integers from 1 to 50. For multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".

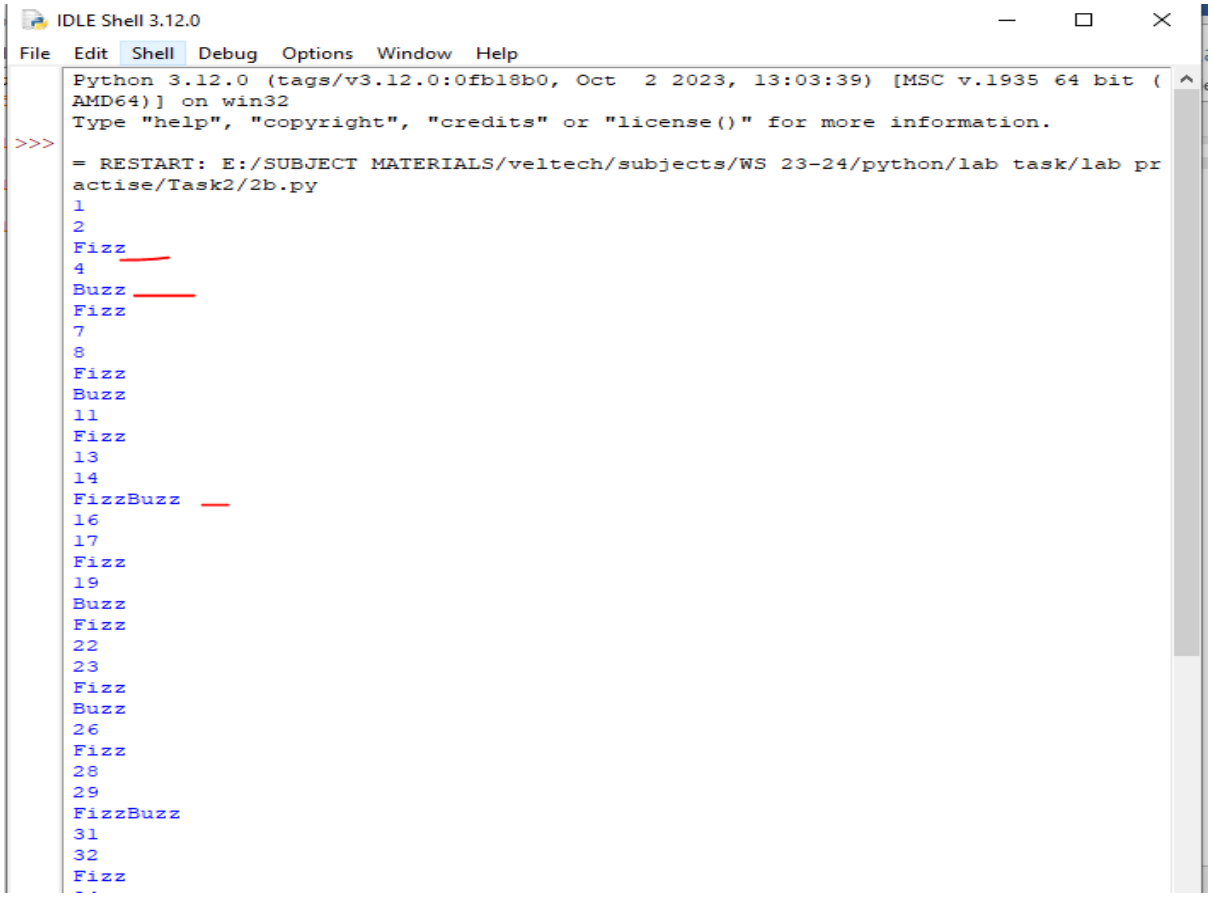
***Sample Output* :**

fizzbuzz
1
2
fizz
4

**PROGRAM**

```
for number in range(1, 51):
    if number % 3 == 0 and number % 5 == 0:
        print("FizzBuzz")
    elif number % 3 == 0:
        print("Fizz")
    elif number % 5 == 0:
        print("Buzz")
    else:
        print(number)
```

**OUTPUT**

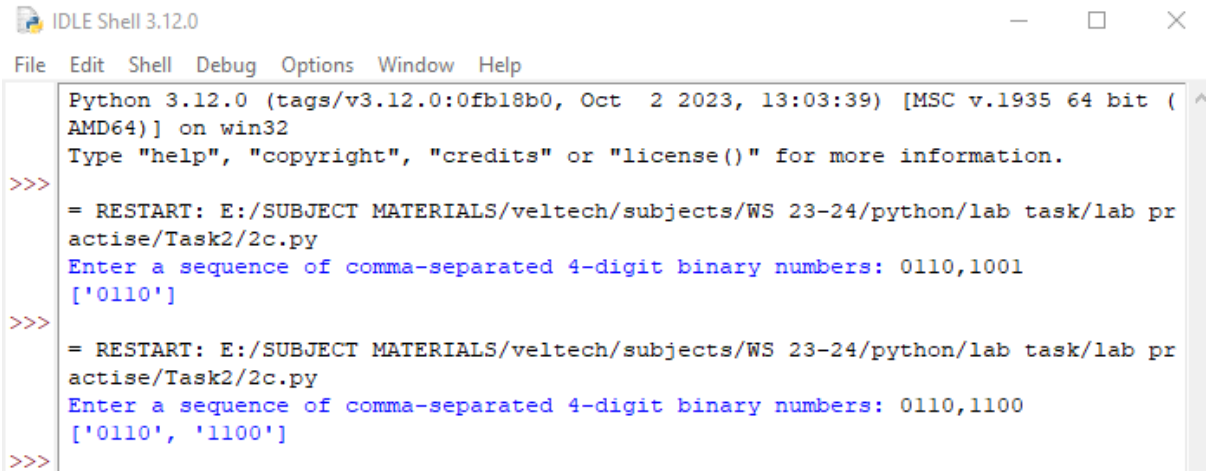


**Problem 3:**
Keerthi wants to build a solution for the problem which accepts a sequence of comma separated 4-digit binary numbers as its input and print the numbers that are divisible by 6 in a comma separated sequence. Help Keerthi to solve this problem.

**PROGRAM:**

```
nums = list(input("Enter a sequence of comma-separated 4-digit binary numbers: ").split(','))
# example: 0101,1000,1001,1010

res = [i for i in nums if int(i, 2) % 6==0]

print(res)
```

**OUTPUT:**




**Problem 4:**
Keerthi wants to build a solution for the problem to count the number of even and odd numbers from a series of numbers.

**PROGRAM:**

```
def count_even_odd(numbers):
    even_count = 0
    odd_count = 0

    for num in numbers:
        if num % 2 == 0:
            even_count += 1
        else:
            odd_count += 1

    return even_count, odd_count

input_numbers = input("Enter a series of numbers separated by spaces: ")
numbers = list(map(int, input_numbers.split()))
```

```
even_count, odd_count = count_even_odd(numbers)
print("Number of even numbers:", even_count)
print("Number of odd numbers:", odd_count)
```

**OUTPUT:**