

**BS Artificial Intelligence**

**Name:** Elimelech

**Roll No:** SU92-BSAIM-F24-009

**Subject:** Artificial Intelligence (Lab)

Lab Task - Fizz Buzz Game

# Introduction

This program is a variation of the classic Fizz Buzz game implemented in Python. It combines random number generation, user input, and conditional checks to determine whether the result is Fizz, Buzz, FizzBuzz, or just a number. This activity is designed to reinforce the concepts of loops, conditional statements, and working with the random module.

# Steps Explanation

## Step 1: Defining the Number of Rounds

The variable 'rounds' is used to specify how many times the game will run. In this case, it is set to 4, meaning the game repeats for four rounds.

## Step 2: Looping Through the Rounds

A for loop runs from 1 to the value of rounds. At the beginning of each iteration, it displays the round number to indicate progress in the game.

## Step 3: Computer's Random Number

The program uses random.randint(1, 20) to generate a number between 1 and 20 for the computer. This number is then shown to the user.

## Step 4: User Input and Validation

The user is prompted to enter a number. The input is checked with isNumeric() to ensure that it contains only digits. If valid, it is converted into an integer for calculation. If invalid, the program displays an error message and skips the FizzBuzz calculation.

## Step 5: Calculating the Sum

If the input is valid, the user's number and the computer's number are added together to form a total. This total is then printed for reference.

## Step 6: Fizz Buzz Check

The program applies Fizz Buzz logic on the sum:  
- If divisible by both 3 and 5, it prints 'FizzBuzz'.  
- If divisible by 3 only, it prints 'Fizz'.  
- If divisible by 5 only, it prints 'Buzz'.  
- Otherwise, it simply prints the total.

# Sample Output Explanation

• At the start of each round, the program shows the round number and the random number chosen by the computer.  
• The user then enters a number, and the program shows the sum of the two numbers.  
• Based on the result, the program prints Fizz, Buzz, FizzBuzz, or just the sum.  
• If the input is invalid, an error message is displayed.

