FIZZBUZZ INSTRUCTION SHEET

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1.0 INTRODUCTION

The FizzBuzz program is a simple number game often used to test basic programming logic. It prints numbers from 1 to 100, but with a twist:

- Numbers divisible by both 5 and 8 are replaced with "FizzBuzz".
- Numbers divisible by 5 are replaced with "Fizz".
- Numbers divisible by 8 are replaced with "Buzz".
- Other numbers are printed as they are.

This instruction sheet will guide you through understanding and executing the FizzBuzz program in Python.

2.0 REQUIREMENTS

- Python installed on your computer.
- A code editor (such as VS Code.

3.0 CODE IMPLEMENTATION

```python
# Define program constants.
TIMES_TO_EXECUTE = 100

# Perform required calculations.
for i in range(1, TIMES_TO_EXECUTE + 1):

    # Displays "FizzBuzz" when divisible by 5 and 8
    if (i % 5 == 0 and i % 8 == 0):
        print("FizzBuzz")

    # Displays "Fizz" when divisible by 5
    elif (i % 5 == 0):
        print("Fizz")

    # Displays "Buzz" when divisible by 8
    elif (i % 8 == 0):
        print("Buzz")

    # Prints number when none of the criteria is met
    else:
        print(i)
```

Figure 1: Fizzbuzz code

4.0 EXECUTION

Step 1: Open Python Environment

- Open your preferred code editor

Step 2: Create a New Python File

- In you editor, create a new python file and name it "Fizzuzz.py" or whatever name you choose. The file must end with the ".py" extension.

Step 3: Create a New Python File

- Write out the code into the newly created file.

Step 4: Run the Program

- Click the run button

Step 5: Observe the Output

- The program will print numbers from 1 to 100.
- "Fizz" appears for multiples of 5, "Buzz" for multiples of 8, and "FizzBuzz" for multiples of both.
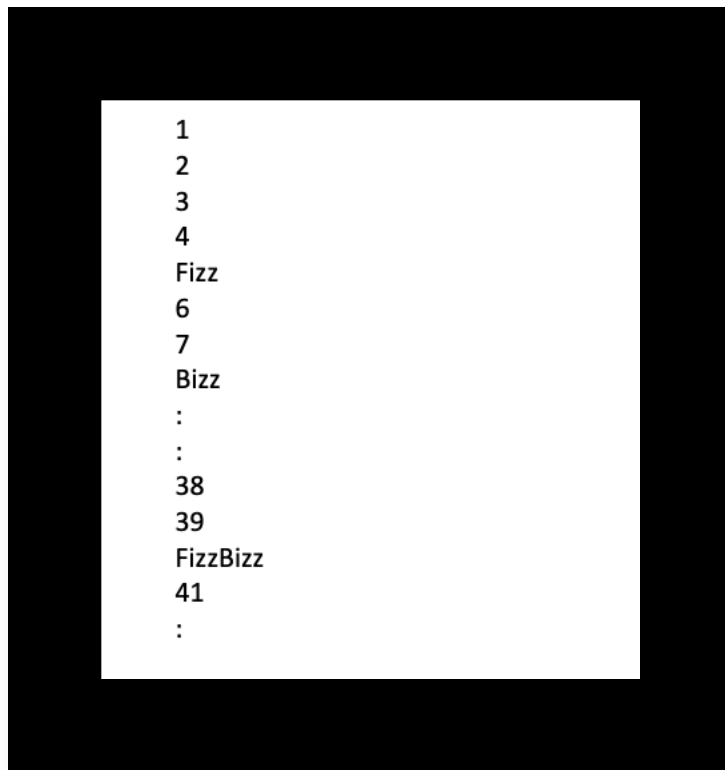
EXAMPLE OUTPUT:

Figure 2: Fizzbuzz Sample Output

5.0 EXPLANATION OF THE CODE

❖ **TIMES_TO_EXECUTE = 100**
  ➢ Defines the range of numbers (1 to 100).

❖ **for i in range(1, TIMES_TO_EXECUTE + 1):**
  ➢ Loops through numbers 1 to 100.

❖ **if (i % 5 == 0 and i % 8 == 0):**
  ➢ Checks divisibility by 5 and 8.

- ❖ **elif (i % 5 == 0):**
  - ➤ Checks divisibility by 5.

- ❖ **elif (i % 8 == 0):**
  - ➤ Checks divisibility by 8.

- ❖ **else: print(i)**
  - ➤ Prints the number if none of the conditions are met.

6.0 MODIFICATIONS

1) **Modify the Range**
   a) Change TIMES_TO_EXECUTE = 100 to any desired number to adjust the range.

2) **Customize the Output**
   a) "Fizz", "Buzz", or "FizzBuzz" can be replaced with other words for fun variations.

7.0 CONCLUSIONS

You have successfully learned how to implement and execute the FizzBuzz program in Python. This exercise improves logical thinking and conditional

programming skills. Experiment with modifications to deepen your understanding!