

## Assignment 3

### Exercise:1

```
months = ["January", "February", "March", "April", "May", "June",  
          "July", "August", "September", "October", "November", "December"]  
month_number=int(input("Enter Month Number:"))  
if 1 <= month_number <= 12:  
    print(f"Month {month_number} is {months[month_number -1]}")  
else:  
    print("Error: Please enter a number between 1-12")
```

### Output:

```
Enter Month Number:4  
Month 4 is April  
  
Process finished with exit code 0
```

### Exercise:2

```
age = int(input("Enter your age:"))  
ticket_cost = 6  
if age < 16 :  
    print("Your ticket cost is: $",ticket_cost/2)  
elif age >= 60:  
    print("Your ticket cost: $",ticket_cost/3)  
else:  
    print("Your ticket cost is: $",ticket_cost)
```

### Output:

```
Enter your age:45  
Your ticket cost is: $ 6  
  
Process finished with exit code 0
```

### Exercise:3

```
Weight = float(input("Enter your body weight in Kilograms:"))  
Height = float(input("Enter your height in meters:"))
```

```
BMI = round(Weight/( Height ** 2),2)
```

```
if BMI < 18.5:  
    print("Underweight")  
elif 18.5 <= BMI < 25:  
    print("Normal")  
elif 25 <= BMI < 30:  
    print("Overweight")  
else:  
    print("Obese")  
print("BMI:",BMI)
```

**Output:**

```
Enter your body weight in Kilograms:75
Enter your height in meters:1.75
Normal
BMI: 24.49
```

**Exercise:4**

```
num = int(input("Enter a number:"))
if num < 0:
    print("Factorial is not defined for negative numbers.")
else :
    factorial=1
    for i in range (1,num+1):
        factorial*=i
print(f"Factorial of {num} is : {factorial}")
```

**Output:**

```
Enter a number:8
Factorial of 8 is : 40320

Process finished with exit code 0
```

**Exercise:5**

```
num = int(input("Enter a number:"))
if num < 0:
    print("Factorial is not defined for negative numbers.")
else :
    factorial=1
    for i in range (1,num+1):
        factorial*=i
print(f"Factorial of {num} is : {factorial}")
```

**Output:**

```
Enter a number:3
Factorial of 3 is : 6

Process finished with exit code 0
```

**Exercise:6**

```
number = int(input("Enter a number to reverse: "))
reversed_number = 0
```

```

while number != 0:
    digit = number % 10
    reversed_number = reversed_number * 10 + digit
    number //= 10
print(f"The reversed number is:{reversed_number}")

```

**Output:**

```

Enter a number to reverse: 987654321
The reversed number is:123456789

Process finished with exit code 0

```

**Exercise:7**

```

num=int(input("Enter a number:"))
for i in range(11):
    print(num,"*",i,"=",num*i)

```

**Output:**

```

Enter a number:3
3 * 0 = 0
3 * 1 = 3
3 * 2 = 6
3 * 3 = 9
3 * 4 = 12

```

**Exercise:8**

```

while True:
    user_input = input(':')
    if user_input.lower() == 'done':
        print('Done')
        break
    print(user_input)

```

**Output:**

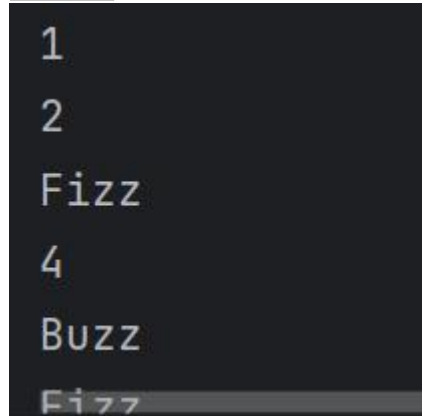
```

:hi
hi
:done
Done

```

**Exercise:9**

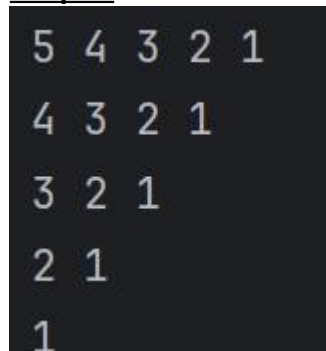
```
for i in range(1, 11):  
    if i % 3 == 0 and i % 5 == 0:  
        print("FizzBuzz")  
    elif i % 3 == 0:  
        print("Fizz")  
    elif i % 5 == 0:  
        print("Buzz")  
    else:  
        print(i)
```

**Output:**A screenshot of a terminal window showing the output of the FizzBuzz program. The output is displayed on a dark background with light-colored text. The numbers 1 through 10 are printed, with 'Fizz' for multiples of 3, 'Buzz' for multiples of 5, and 'FizzBuzz' for multiples of both. The last line, 'Fizz', is partially cut off at the bottom of the image.

```
1  
2  
Fizz  
4  
Buzz  
Fizz
```

**Exercise:10**

```
for i in range(5, 0, -1):  
    for j in range(i, 0, -1):  
        print(j, end=' ')  
    print()
```

**Output:**A screenshot of a terminal window showing the output of the nested loop program. The output is a 5x5 grid of numbers, where each row contains numbers from the current row index down to 1. The numbers are printed in a light color on a dark background, with spaces between them and a new line after each row.

```
5 4 3 2 1  
4 3 2 1  
3 2 1  
2 1  
1
```