



## ARTIFICIAL INTELLIGENCE LAB

BSCYS-3rd Semester

Fall 2025

**Lab Report # 1**

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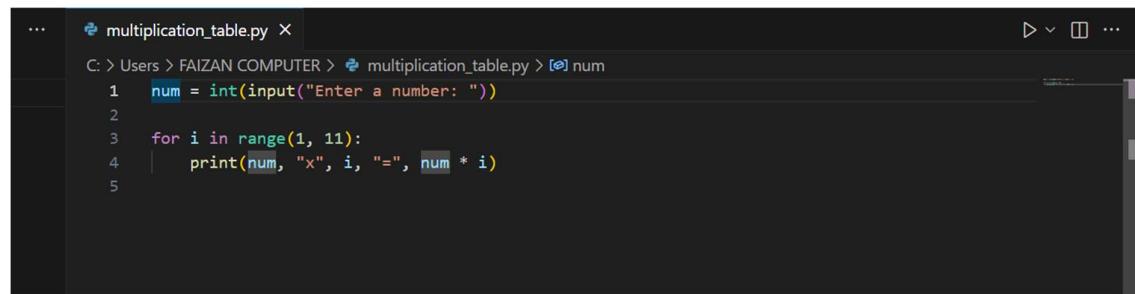
**Department:**Cyber Security (A)

DEPARTMENT OF COMPUTER SCIENCE HITEC UNIVERSITY TAXILA

BS CYBER SECURITY PROGRAM

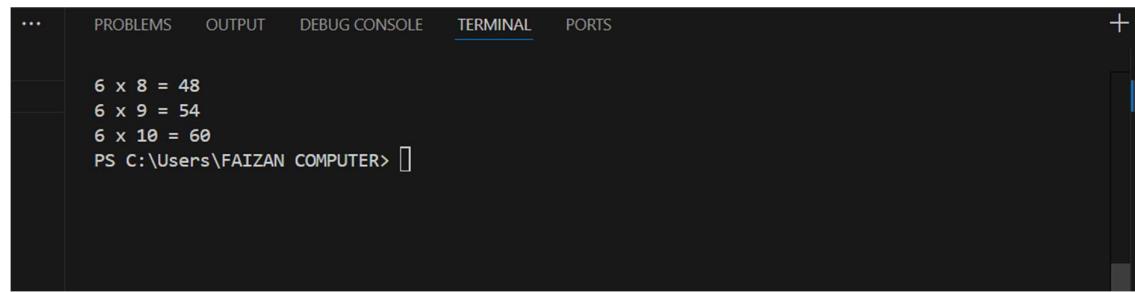
## **TASK 1:**

### **Code:**



```
...  multiplication_table.py X
C: > Users > FAIZAN COMPUTER > multiplication_table.py > num
1 num = int(input("Enter a number: "))
2
3 for i in range(1, 11):
4     print(num, "x", i, "=", num * i)
5
```

### **Output:**



```
... PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS +  
6 x 8 = 48  
6 x 9 = 54  
6 x 10 = 60  
PS C:\Users\FAIZAN COMPUTER>
```

## **Task 2:**

### **Code:**

```
...  multiplication_table.py  prime_number_check.py X
C: > Users > FAIZAN COMPUTER > prime_number_check.py > ...
1 num = int(input("Enter a number: "))
2
3 if num > 1:
4     for i in range(2, num):
5         if num % i == 0:
6             print(num, "is not a Prime Number")
7             break
8     else:
9         print(num, "is a Prime Number")
10    else:
11        print(num, "is not a Prime Number")
12
```

## Output:

```
/python.exe" "c:/Users/FAIZAN COMPUTER/prime_number_check.py"
Enter a number: 7
7 is a Prime Number
PS C:\Users\FAIZAN COMPUTER> []
```

## Task 3(a) Print numbers from 1 to 10

### Code:

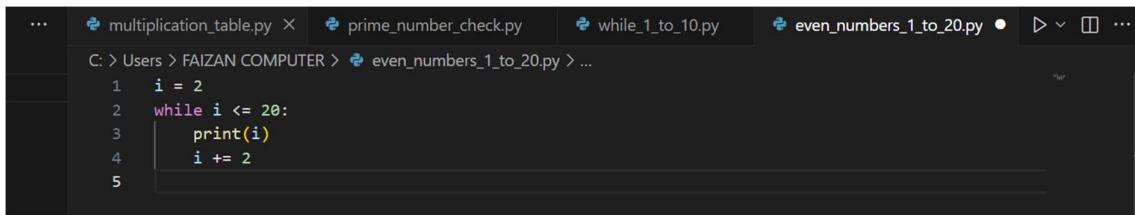
```
...  multiplication_table.py  prime_number_check.py  while_1_to_10.py X
C: > Users > FAIZAN COMPUTER > while_1_to_10.py > ...
1 i = 1
2 while i <= 10:
3     print(i)
4     i += 1
5
```

## Output:

```
8
9
10
PS C:\Users\FAIZAN COMPUTER> 
```

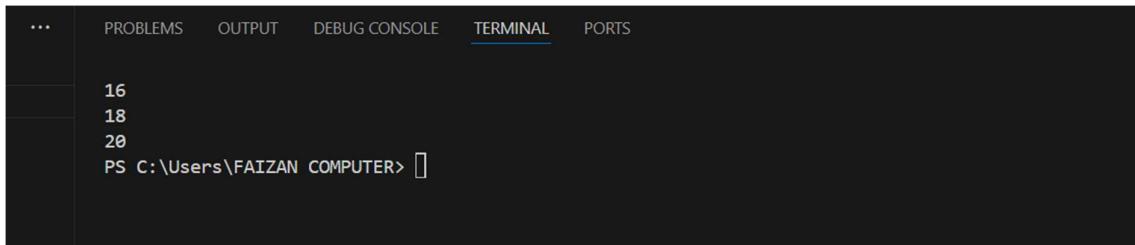
## Task 3(b) Print even numbers between 1 and 20

### Code:



```
... multiplication_table.py ✘ prime_number_check.py while_1_to_10.py even_numbers_1_to_20.py ● ▶ v ⌂ ...
C: > Users > FAIZAN COMPUTER > even_numbers_1_to_20.py > ...
1 i = 2
2 while i <= 20:
3     print(i)
4     i += 2
5 
```

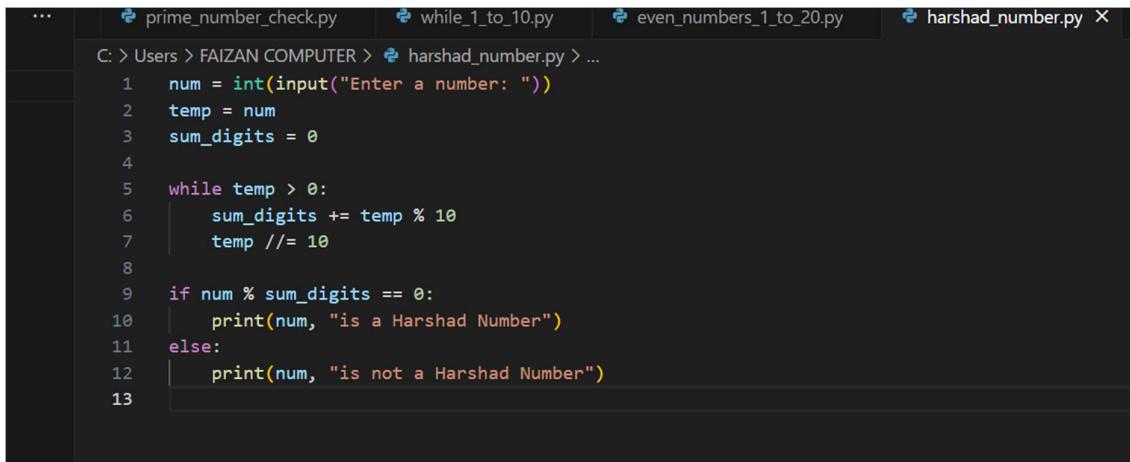
## Output:



```
... PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
16
18
20
PS C:\Users\FAIZAN COMPUTER> 
```

## Task 4:

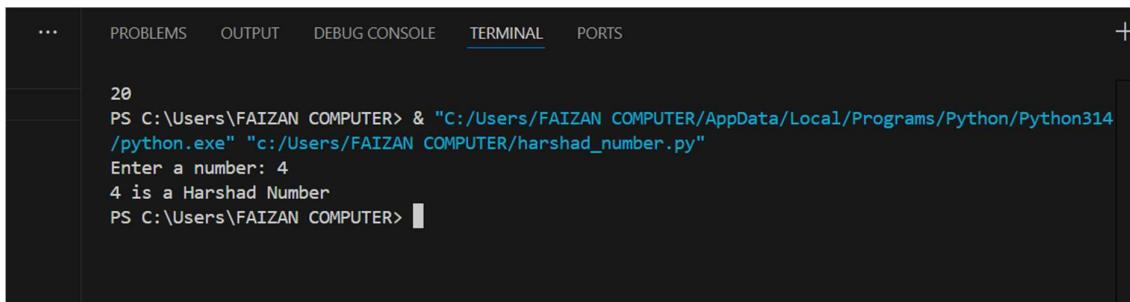
### Code:



The screenshot shows a dark-themed code editor in VS Code. At the top, there are four tabs: prime\_number\_check.py, while\_1\_to\_10.py, even\_numbers\_1\_to\_20.py, and harshad\_number.py (which is currently active). Below the tabs, the code for harshad\_number.py is displayed:

```
... prime_number_check.py while_1_to_10.py even_numbers_1_to_20.py harshad_number.py ...
C: > Users > FAIZAN COMPUTER > harshad_number.py > ...
1 num = int(input("Enter a number: "))
2 temp = num
3 sum_digits = 0
4
5 while temp > 0:
6     sum_digits += temp % 10
7     temp //= 10
8
9 if num % sum_digits == 0:
10    print(num, "is a Harshad Number")
11 else:
12    print(num, "is not a Harshad Number")
13
```

## Output:



The screenshot shows the terminal tab in VS Code. The terminal window has a header with tabs: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is underlined, indicating it's active), and PORTS. The terminal output is as follows:

```
...
20
PS C:\Users\FAIZAN COMPUTER> & "C:/Users/FAIZAN COMPUTER/AppData/Local/Programs/Python/Python314/python.exe" "c:/Users/FAIZAN COMPUTER/harshad_number.py"
Enter a number: 4
4 is a Harshad Number
PS C:\Users\FAIZAN COMPUTER>
```

## Overall conclusion.

In these programs, the multiplication table code prints the table of a user-given number using a for loop, the prime number program checks whether a number has any factors other than 1 and itself, the while loop programs demonstrate looping by printing numbers from 1 to 10 and even numbers from 1 to 20, and the Harshad number program checks if a number is divisible by the sum of its digits. Each code is saved in a separate Python file in VS Code for better organization and clarity, and together they demonstrate the use of loops, conditional statements, user input, and basic number logic in Python.