ARTIFICIAL INTELLIGENCE LAB

BSCYS-3rd Semester

Fall 2025

Lab Report # 1

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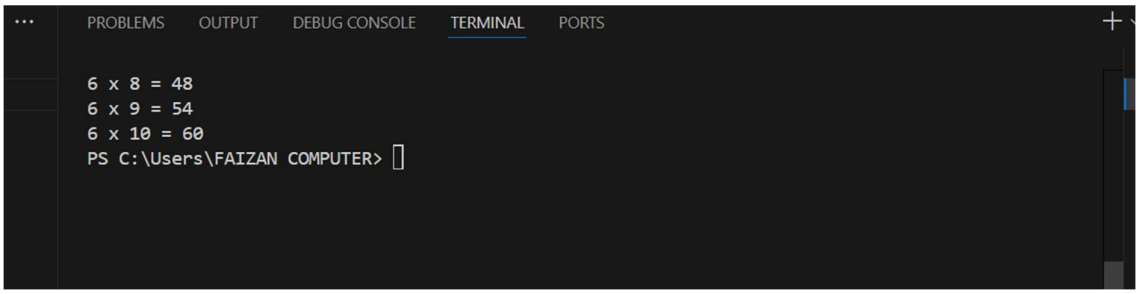
DEPARTMENT OF COMPUTER SCIENCE HITEC UNIVERSITY TAXILA

BS CYBER SECURITY PROGRAM

TASK 1:

Code:

Output:



Task 2:

Code:

multiplication_table.py | prime_number_check.py

C: > Users > FAIZAN COMPUTER > prime_number_check.py > ...

```python
num = int(input("Enter a number: "))

if num > 1:
    for i in range(2, num):
        if num % i == 0:
            print(num, "is not a Prime Number")
            break
    else:
        print(num, "is a Prime Number")
else:
    print(num, "is not a Prime Number")

```

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

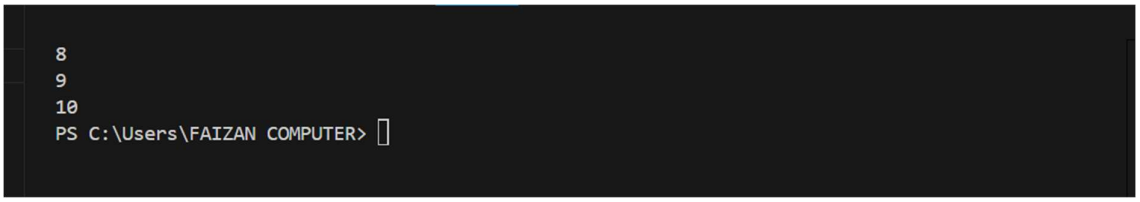
Code:

multiplication_table.py | prime_number_check.py | while_1_to_10.py

C: > Users > FAIZAN COMPUTER > while_1_to_10.py > ...

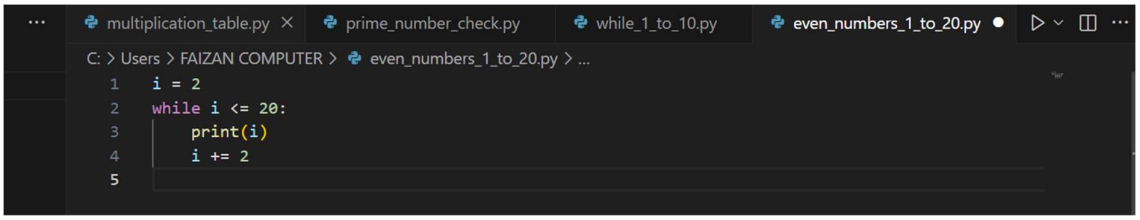
```python
i = 1
while i <= 10:
    print(i)
    i += 1

```

Output:

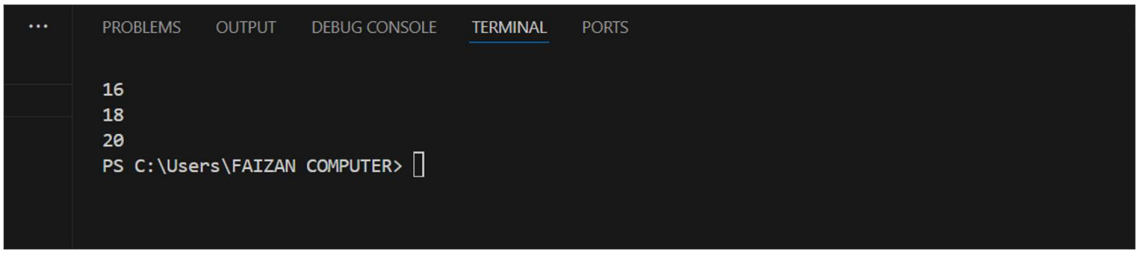


Task 3(b) Print even numbers between 1 and 20

Code:



Output:

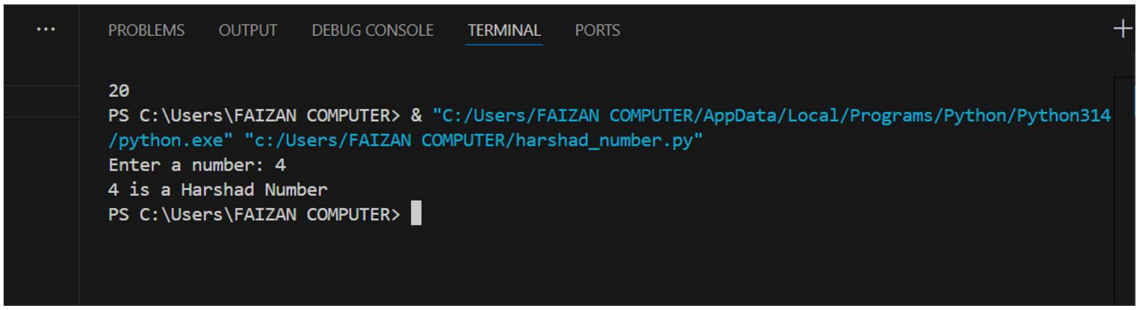


Task 4:

Code:

```python
num = int(input("Enter a number: "))
temp = num
sum_digits = 0

while temp > 0:
    sum_digits += temp % 10
    temp //= 10

if num % sum_digits == 0:
    print(num, "is a Harshad Number")
else:
    print(num, "is not a Harshad Number")
```

Output:



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.