

PRACTICAL - 2

AIM: Understanding control structure for Python programming language

- A. Write a Python program to find number of prime numbers between 1 to n where n is defined by user.

Code :-

```
P2.py > ...
1  def is_prime(num):
2      if num <= 1:
3          return False
4      for i in range(2, int(num ** 0.5) + 1):
5          if num % i == 0:
6              return False
7      return True
8
9  def print_primes(n):
10     print(f"Prime numbers between 1 and {n} are:")
11     for i in range(2, n + 1):
12         if is_prime(i):
13             print(i, end=" ")
14
15
16  n = int(input("Enter a number n: "))
17  print_primes(n)
18
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
D:\CAMII>python -u "d:\CAMII\P2.py"
Enter a number n: 5
Prime numbers between 1 and 5 are:
2 3 5
D:\CAMII>
```

B. Write a Python program to test whether a passed letter is a vowel or not using vowel (character) function.

Code :-

```
19
20 def is_vowel(char):
21     """Check if the given character is a vowel."""
22     vowels = 'aeiouAEIOU'
23     return char in vowels
24
25
26 char = input("Enter a single letter: ")
27
28 if len(char) == 1 and char.isalpha():
29     if is_vowel(char):
30         print(f"'{char}' is a vowel.")
31     else:
32         print(f"'{char}' is not a vowel.")
33 else:
34     print("Please enter a valid single letter.")
35
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

```
D:\CAMII>python -u "d:\CAMII\P2.py"
Enter a single letter: e
'e' is a vowel.
```