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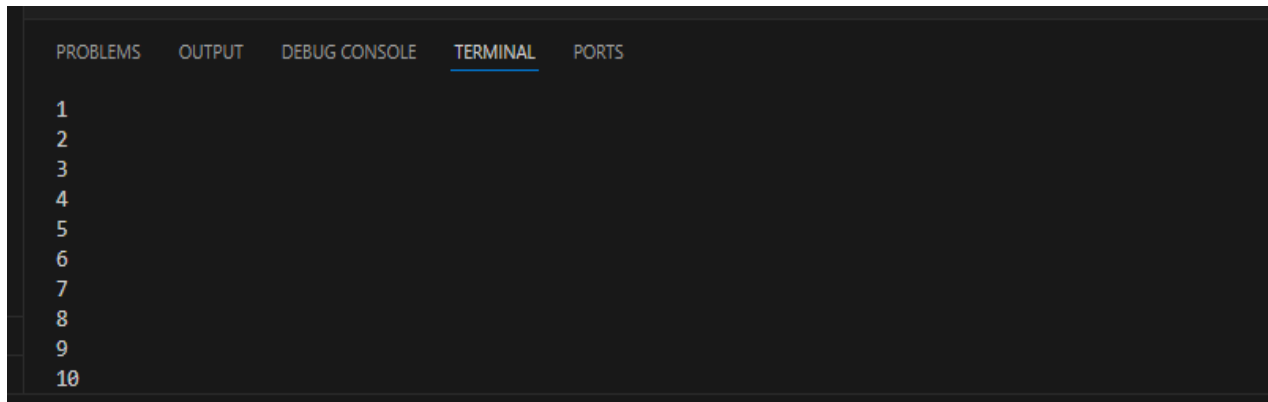
**GitHub Link:** <https://github.com/Beshair-Khan/Python-Lab>

## Lab 05

**Task 1:** Basic Task: Write a for loop to print the first 10 natural numbers.

```
for i in range(1, 11):  
    print(i)
```

## Output

A screenshot of a code editor interface. At the top, there are five tabs: 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL', and 'PORTS'. The 'TERMINAL' tab is selected and highlighted with a blue underline. Below the tabs, the terminal window displays the output of the Python code, showing the first 10 natural numbers (1 through 10) on separate lines. The numbers are displayed in a light gray font on a dark background.

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

**Task 2: Intermediate Task:** Write a while loop that prints numbers from 10 down to 1

```
i = 10
while i >= 1:
    print(i)
    i -= 1
```

## Output

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Uni programs\Lab manuals> & D:/Python/python.exe "d:/Uni programs/Lab manuals/lab task1.py"
10
9
8
7
6
5
4
3
2
1
PS D:\Uni programs\Lab manuals>
```

**Task 3: Advanced Task:** Create a program that uses a for loop to iterate over a string and count the number of vowels.

```
text = input("Enter a string: ")
vowels = "aeiouAEIOU"
count = 0
for char in text:
    if char in vowels:
        count += 1
print("Number of vowels:", count)
```

## Output

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Uni programs\Lab manuals> & D:/Python/python.exe "d:/Uni programs/Lab manuals/lab task1.py"
Enter a string: Beshair Khan
Number of vowels: 4
PS D:\Uni programs\Lab manuals> |
```

**Task 4:** Write a program that prints the Fibonacci series up to n terms using a while loop.

```
n = int(input("Enter the number of terms: "))
a, b = 0, 1
count = 0
while count < n:
    print(a, end=" ")
    a, b = b, a + b
    count += 1
```

## Output

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS D:\Uni programs\Lab manuals> & D:/Python/python.exe "d:/Uni programs/Lab manuals/lab task1.py"
Enter the number of terms: 20
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181
PS D:\Uni programs\Lab manuals> |
```