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Lab 5:

Task 1:

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

Program:

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

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

Task 2:



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

Program:

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

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

Task 3:

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

Program:



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```
: text = input("Enter a string: ")
vowels = "aeiouAEIOU"
count = 0

for char in text:
    if char in vowels:
        count += 1

print("Number of vowels:", count)
```

```
Enter a string: a
Number of vowels: 1
```

Challenge Task:

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

Program:

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

while count < n:
    print(a)
    a, b = b, a + b
    count += 1
```

```
Enter the number of terms: 3
0
1
1
```



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