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<u>Lab 2:</u>

Task 1:

Print numbers from 1 to 10 using a for loop.

Program:

```
[1]: for num in range(1, 11):
    print(num)

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

Task 2:



Print all even numbers between 1 and 20 using a while loop.

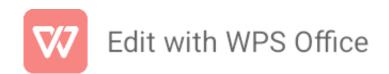
Program:

```
[2]: num = 2
while num <= 20:
    print(num)
    num += 2</pre>
2
4
6
8
10
12
14
16
18
20
```

Task 3:

Calculate the sum of numbers from 1 to 100 using a loop.

Program:



```
[3]: total = 0
for num in range(1, 101):
    total += num

print(f"The sum of numbers from 1 to 100 is: {total}")
```

The sum of numbers from 1 to 100 is: 5050

Task 4:

Print the multiplication table of 5 using a loop:

Program:

```
[4]: num = 5
print(f"Multiplication Table of {num}:")

for i in range(1, 11):
    print(f"{num} x {i} = {num * i}")

Multiplication Table of 5:
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
```

Task 5:

Find the factorial of a given number using a for loop.

Program:



```
[5]: num = int(input("Enter a number to find its factorial: "))
factorial = 1
if num < 0:
    print("Factorial does not exist for negative numbers.")
else:
    for i in range(1, num + 1):
        factorial *= i

    print(f"The factorial of {num} is: {factorial}")</pre>
```

Enter a number to find its factorial: 4
The factorial of 4 is: 24

Task 6:

Create a list of numbers and print only the odd numbers using a loop.

Program:

```
[6]: numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
for num in numbers:
    if num % 2 != 0:
        print(num)
1
3
5
7
9
```

Task 7:



Iterate over a list of fruits and print each item.

Program:

```
fruits = ["apple", "banana", "cherry", "date", "elderberry", "fig", "grape"]
for fruit in fruits:
    print(fruit)

apple
banana
cherry
date
elderberry
fig
grape
```