Name: Muhammad Ozair

ID: 4356-2023B

Lab Task: 4

Subject: Software **Construction and Development**

Department: BSSE

Semester: 5th

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Task 1:

Write a function that takes a price and tax percentage and returns the final price after tax.

Code:

```python
def final_price(price, tax_percent):
    return price + (price * tax_percent / 100)

print(final_price(100, 10))
```

Output:

```
Problems  Output  Debug Console  Terminal  Ports

PS C:\Users\5550\OneDrive\Desktop\Python\Labtask> python b.py
110.0
PS C:\Users\5550\OneDrive\Desktop\Python\Labtask>
```

Task 2:

Make a function that accepts a number and returns its factorial.

Code

```python
# print(final_price(100, 10))

def factorial(n):
    if n == 0 or n == 1:
        return 1
    return n * factorial(n - 1)

number = int(input("Enter a number: "))
print("Factorial is:", factorial(number))
```

Output:

```
Problems  Output  Debug Console  Terminal  Ports

PS C:\Users\5550\OneDrive\Desktop\Python\Labtask> python b.py
Enter a number: 4
Factorial is: 24
PS C:\Users\5550\OneDrive\Desktop\Python\Labtask>
```

Task 3:

3. Write a function that accepts a temperature in Celsius and returns

- "Cold" if temp < 10
- "Warm" if 10-25
- "Hot" if > 25 **Code:**

```
b.py
b.py > ...
12  # print("Factorial is:", factorial(number))
13
14  def check_temperature(temp):
15      if temp < 10:
16          return "Cold"
17      elif temp <= 25:
18          return "Warm"
19      else:
20          return "Hot"
21
22  temperature = float(input("Enter temperature in Celsius: "))
23  print(check_temperature(temperature))
```

Output:

Task 4:

```
Problems  Output  Debug Console  Terminal  Ports

PS C:\Users\5550\OneDrive\Desktop\Python\Labtask> python b.py
Enter temperature in Celsius: 20
Warm
PS C:\Users\5550\OneDrive\Desktop\Python\Labtask>
```

Create a function that takes two numbers and returns

- The sum
- The difference
- The product

Code

```python
# print(check_temperature(temperature))

def calculate(a, b):
    sum_value = a + b
    difference = a - b
    product = a * b
    return sum_value, difference, product

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))

result = calculate(num1, num2)

print("Sum:", result[0])
print("Difference:", result[1])
print("Product:", result[2])

```

Output:

```
Problems  Output  Debug Console  Terminal  Ports

PS C:\Users\5550\OneDrive\Desktop\Python\Labtask> python b.py
Enter first number: 23
Enter second number: 45
Sum: 68
Difference: -22
Product: 1035
PS C:\Users\5550\OneDrive\Desktop\Python\Labtask>
```

Task 5:

Pass the list to the function and sum all the values of the list.

Code:

b.py

```python
# print("Product:", result[2])

def sum_list(numbers):
    total = 0
    for num in numbers:
        total = total + num
    return total

my_list = [1, 2, 3, 4, 5]
print("Sum of list:", sum_list(my_list))
```

Output:

```
Problems  Output  Debug Console  Terminal  Ports

PS C:\Users\5550\OneDrive\Desktop\Python\Labtask> python b.py
Sum of list: 15
PS C:\Users\5550\OneDrive\Desktop\Python\Labtask>
```