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Internship Domain : Python Internee

Task Week : 5th

Instructor Name : Hassan

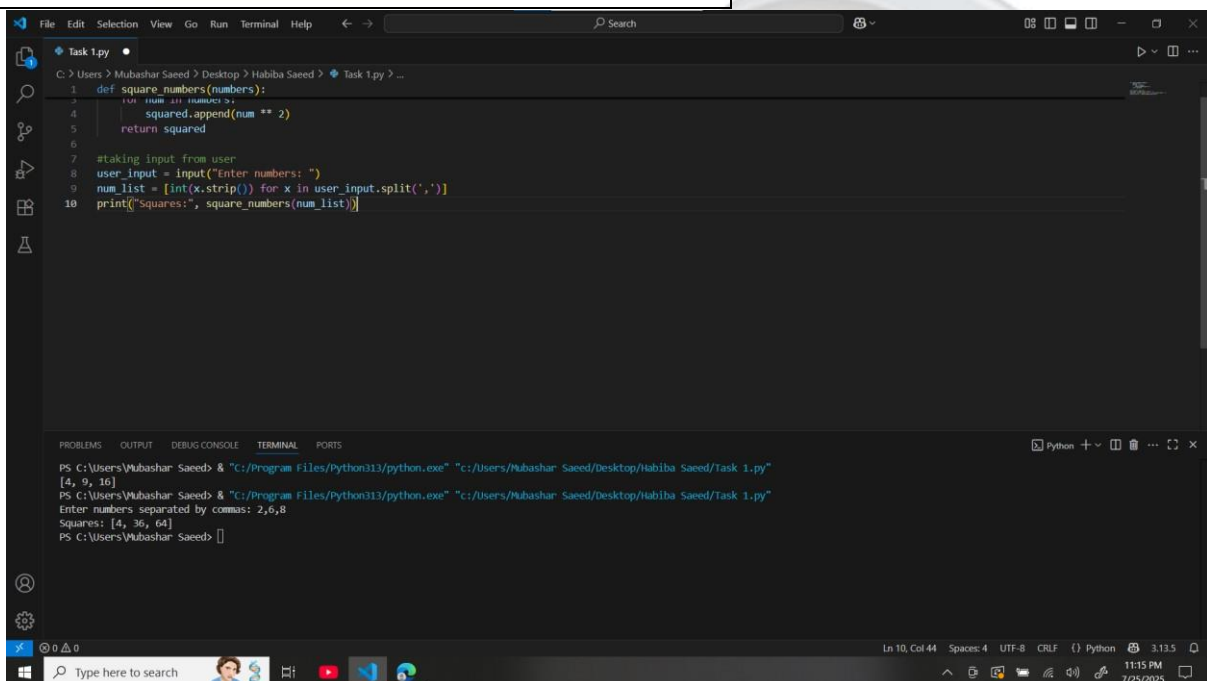
Task 1 :

Write your Task Discription

Solution :

```
def square_numbers(numbers):
    squared = []
    for num in numbers:
        squared.append(num ** 2)
    return squared

#taking input from user
user_input = input("Enter numbers: ")
num_list = [int(x.strip()) for x in user_input.split(',')]
print("Squares:", square_numbers(num_list))
```



The screenshot shows a Python IDE with a file named 'Task 1.py'. The code in the file is as follows:

```
1 def square_numbers(numbers):
2     for num in numbers:
3         squared.append(num ** 2)
4     return squared
5
6
7 #taking input from user
8 user_input = input("Enter numbers: ")
9 num_list = [int(x.strip()) for x in user_input.split(',')]
10 print("Squares:", square_numbers(num_list))
```

The terminal output shows the execution of the program:

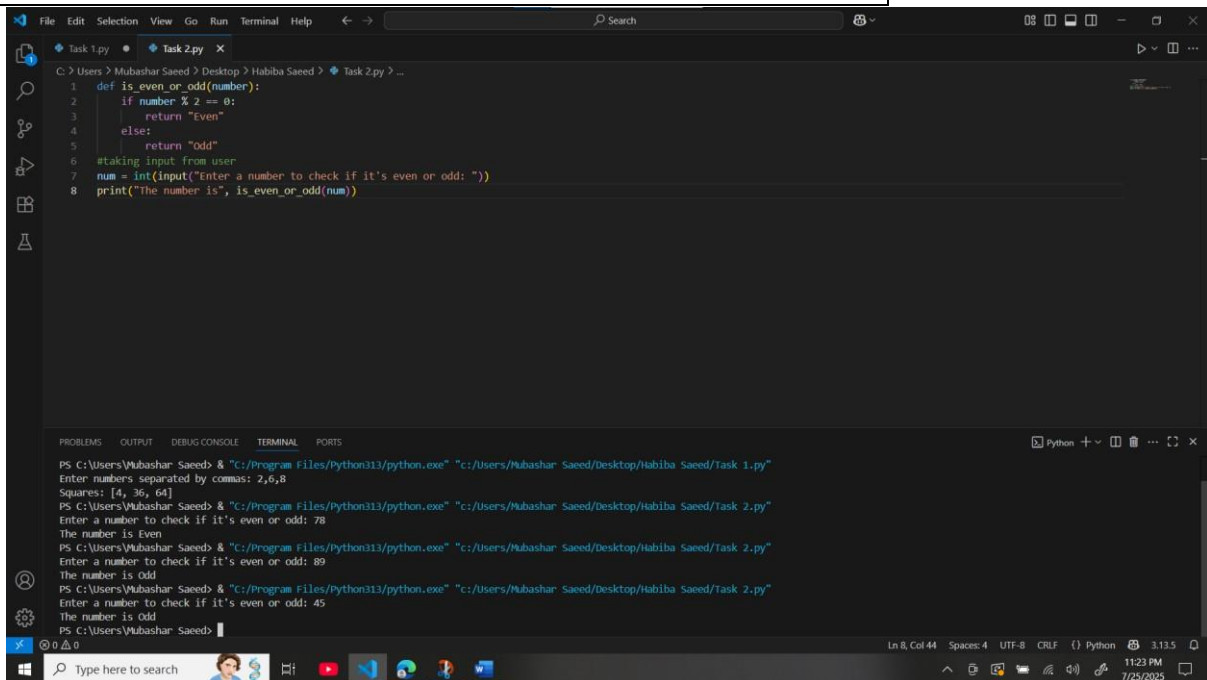
```
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 1.py"
[4, 9, 16]
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 1.py"
Enter numbers separated by commas: 2,6,8
Squares: [4, 36, 64]
PS C:\Users\Mubashar Saeed>
```

```
def is_even_or_odd(number):
    if number % 2 == 0:
        return "Even"
    else:
```

Task 2 :

Solution :

```
return "Odd" #taking input from user num =  
int(input("Enter a number to check if it's even or odd: "))  
print("The number is", is_even_or_odd(num))
```



The screenshot shows a Visual Studio Code editor window with a Python file named 'Task 2.py'. The code defines a function 'is_even_or_odd' that checks if a number is even or odd and prints the result. The terminal shows the execution of the script, with input and output for three different numbers: 2, 78, and 45.

```
1 def is_even_or_odd(number):  
2     if number % 2 == 0:  
3         return "Even"  
4     else:  
5         return "Odd"  
6  
7 #taking input from user  
8 num = int(input("Enter a number to check if it's even or odd: "))  
9 print("The number is", is_even_or_odd(num))
```

Terminal Output:

```
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 1.py"  
Enter numbers separated by commas: 2,6,8  
Squares: [4, 36, 64]  
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 2.py"  
Enter a number to check if it's even or odd: 78  
The number is Even  
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 2.py"  
Enter a number to check if it's even or odd: 89  
The number is Odd  
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 2.py"  
Enter a number to check if it's even or odd: 45  
The number is Odd  
PS C:\Users\Mubashar Saeed>
```

TECHNIK NEST

Task 3 :

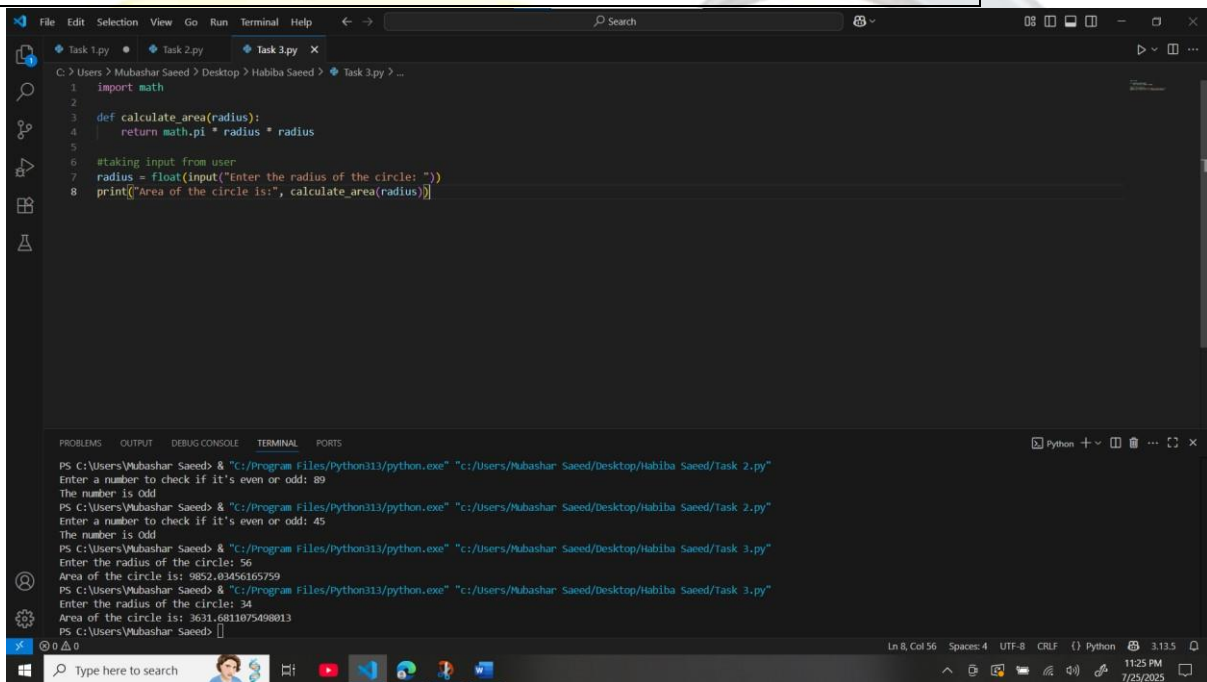
Solution :

```
import math
```

```
def calculate_area(radius):
```

```
    return math.pi * radius * radius
```

```
#taking input from user radius = float(input("Enter the radius of the  
circle: ")) print("Area of the circle is:", calculate_area(radius))
```



The screenshot shows a Python IDE with a dark theme. The editor displays the code for Task 3, which calculates the area of a circle. The code is as follows:

```
1 import math
2
3 def calculate_area(radius):
4     return math.pi * radius * radius
5
6 #taking input from user
7 radius = float(input("Enter the radius of the circle: "))
8 print("Area of the circle is:", calculate_area(radius))
```

The terminal window at the bottom shows the execution of the program. It displays the prompt "Enter a number to check if it's even or odd: 89" and the output "The number is Odd". It then displays the prompt "Enter a number to check if it's even or odd: 45" and the output "The number is Odd". Finally, it displays the prompt "Enter the radius of the circle: 56" and the output "Area of the circle is: 9852.03456165759". The status bar at the bottom indicates the file is "Ln 8, Col 56", the encoding is "UTF-8", the line endings are "CRLF", and the interpreter is "Python 3.13.5".

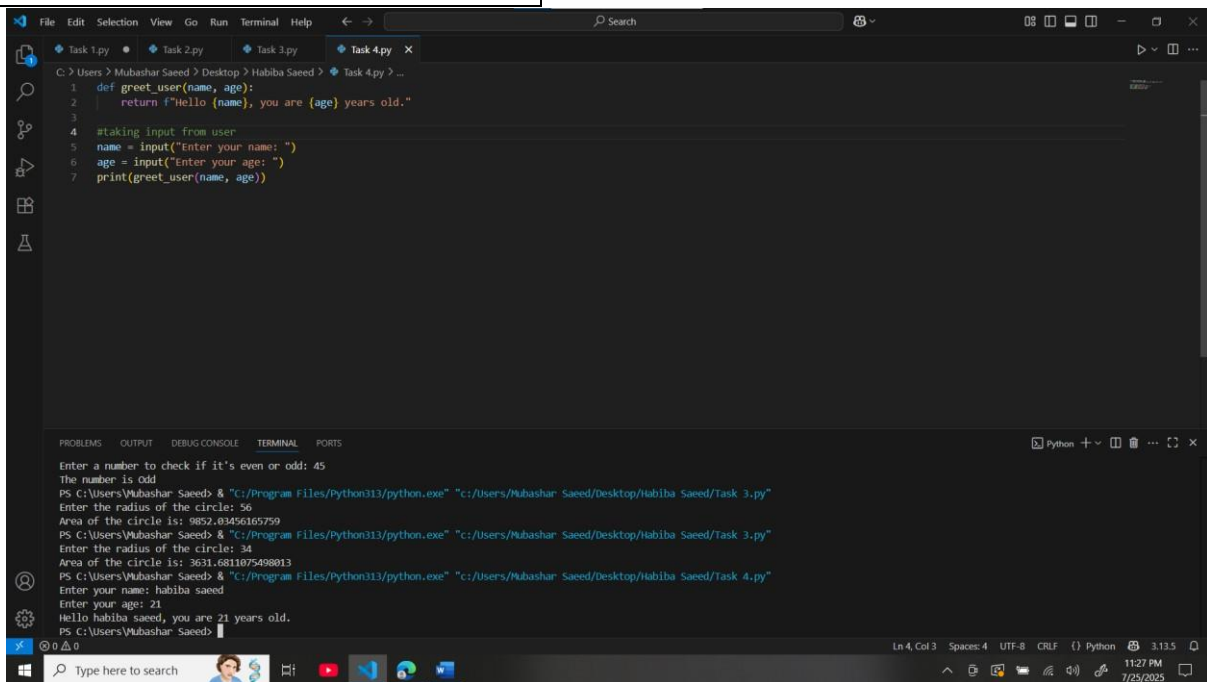
```
def greet_user(name, age):
```

```
    return f"Hello {name}, you are {age} years old."
```

Task 4 :

Solution :

```
#taking input from user
name = input("Enter your name: ")
age = input("Enter your age: ")
print(greet_user(name, age))
```



The screenshot shows a Visual Studio Code editor with a Python file named 'Task 4.py'. The code defines a function 'greet_user' that takes 'name' and 'age' as arguments and returns a string. It then takes user input for 'name' and 'age' and prints the result of 'greet_user'. The terminal at the bottom shows the execution of the script, where the user enters 'habiba saeed' for the name and '21' for the age, resulting in the output 'Hello habiba saeed, you are 21 years old.'

```
1 def greet_user(name, age):
2     return f"Hello {name}, you are {age} years old."
3
4 #taking input from user
5 name = input("Enter your name: ")
6 age = input("Enter your age: ")
7 print(greet_user(name, age))
```

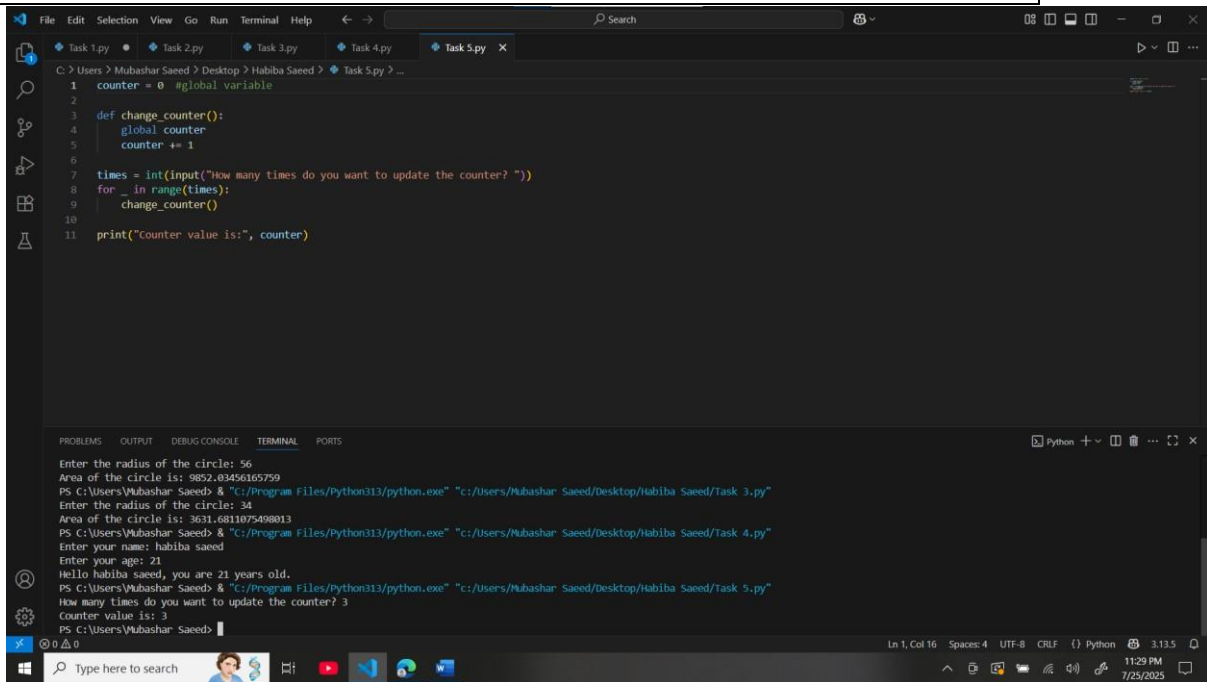
Enter a number to check if it's even or odd: 45
The number is Odd
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 3.py"
Enter the radius of the circle: 56
Area of the circle is: 9852.03456165759
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 3.py"
Enter the radius of the circle: 34
Area of the circle is: 3631.6811075498013
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 4.py"
Enter your name: habiba saeed
Enter your age: 21
Hello habiba saeed, you are 21 years old.
PS C:\Users\Mubashar Saeed>

```
counter = 0 #global variable def
change_counter():
    global counter
    counter += 1
```

Task 5 :

Solution :

```
times = int(input("How many times do you want to update the counter?  
"))  
for _ in range(times):  
    change_counter()  
    print("Counter value is:",  
counter)
```



```
1 counter = 0 #global variable  
2  
3 def change_counter():  
4     global counter  
5     counter += 1  
6  
7 times = int(input("How many times do you want to update the counter? "))  
8 for _ in range(times):  
9     change_counter()  
10  
11 print("Counter value is:", counter)
```

Enter the radius of the circle: 56
Area of the circle is: 9852.03456165759
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 3.py"
Enter the radius of the circle: 34
Area of the circle is: 3631.6811075498013
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 4.py"
Enter your name: habiba saeed
Enter your age: 21
Hello habiba saeed, you are 21 years old.
PS C:\Users\Mubashar Saeed> & "C:/Program Files/Python313/python.exe" "C:/Users/Mubashar Saeed/Desktop/Habiba Saeed/Task 5.py"
How many times do you want to update the counter? 3
Counter value is: 3
PS C:\Users\Mubashar Saeed>

```
# main.py from math_tools import
```

```
multiply x = int(input("Enter first
```

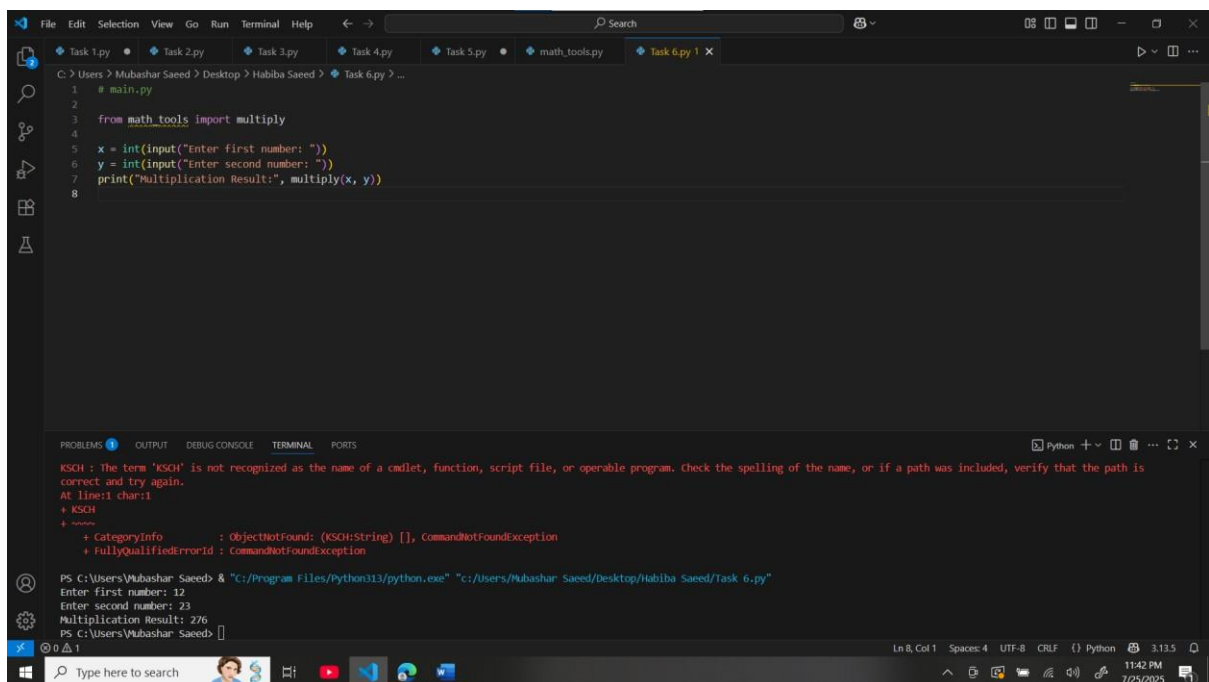
```
number: ")) y = int(input("Enter second
```

```
number: "))
```

```
print("Multiplication Result:", multiply(x, y))
```

Task 6 :

Solution :



The screenshot shows the Visual Studio Code editor with a file named `Task 6.py` open. The code in the editor is as follows:

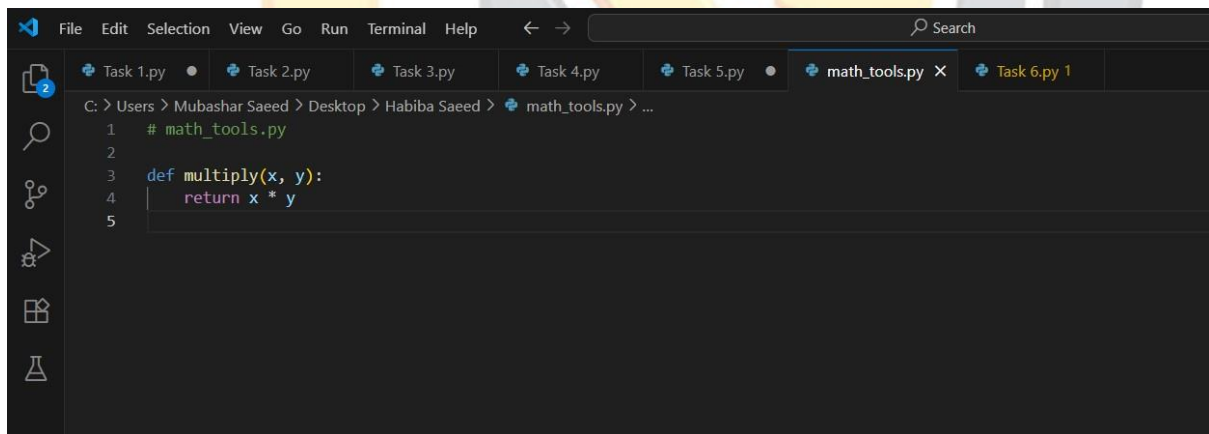
```
1 # main.py
2
3 from math_tools import multiply
4
5 x = int(input("Enter first number: "))
6 y = int(input("Enter second number: "))
7 print("Multiplication Result:", multiply(x, y))
8
```

The `PROBLEMS` panel at the bottom shows an error:

```
KSCH : The term 'KSCH' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ KSCH
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (KSCH:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException
```

The `TERMINAL` panel shows the command prompt output:

```
PS C:\Users\Mubashar Saeed > "C:\Program Files\Python313\python.exe" "C:\Users\Mubashar Saeed\Desktop\Habiba Saeed\Task 6.py"
Enter first number: 12
Enter second number: 23
Multiplication Result: 276
PS C:\Users\Mubashar Saeed >
```



The screenshot shows the Visual Studio Code editor with a file named `math_tools.py` open. The code in the editor is as follows:

```
1 # math_tools.py
2
3 def multiply(x, y):
4     return x * y
5
```

```
def multiply(x, y):  
    return x * y
```