Submitted To:

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Semester: 3rd

Department: CPED

Data Structures and Algorithms

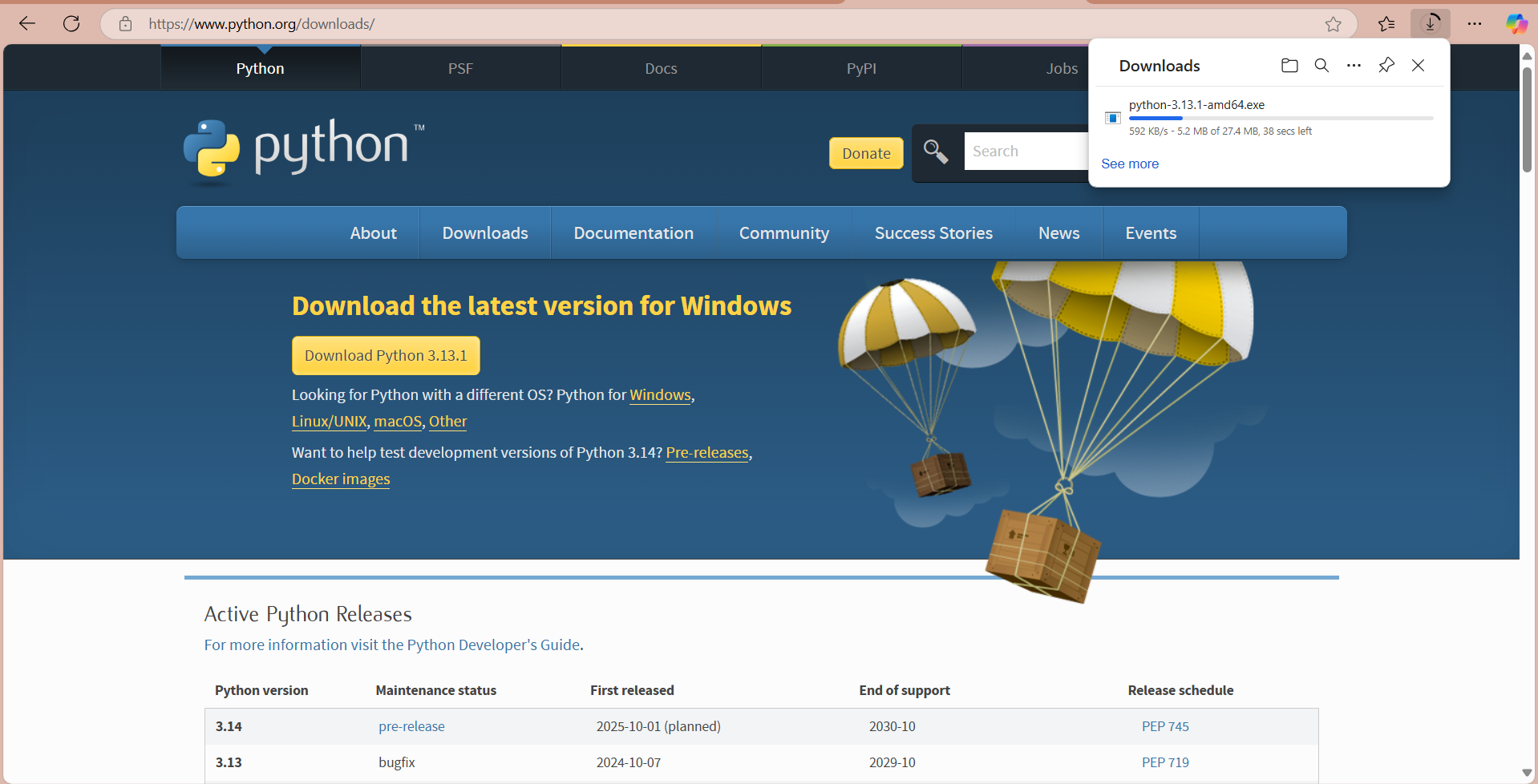
(DSA)  
Lab Report 1

# Lab Report 1

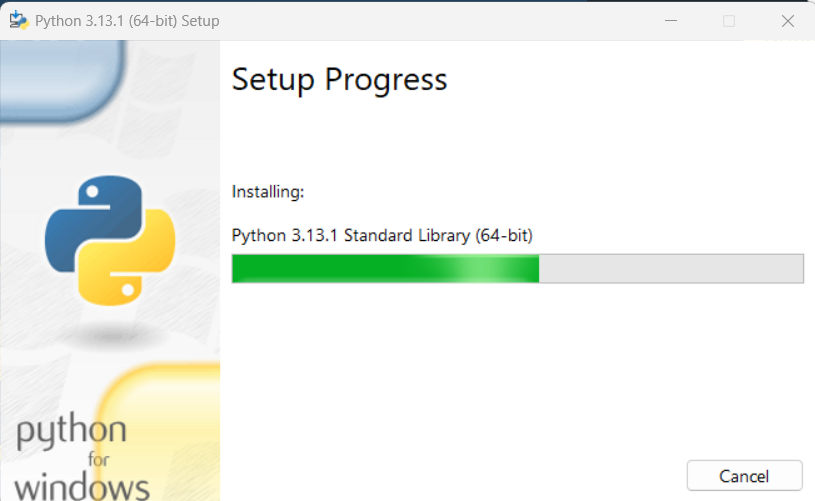
## **Completing Requirements:**

* Installed Python 3.13.1 using the link below:

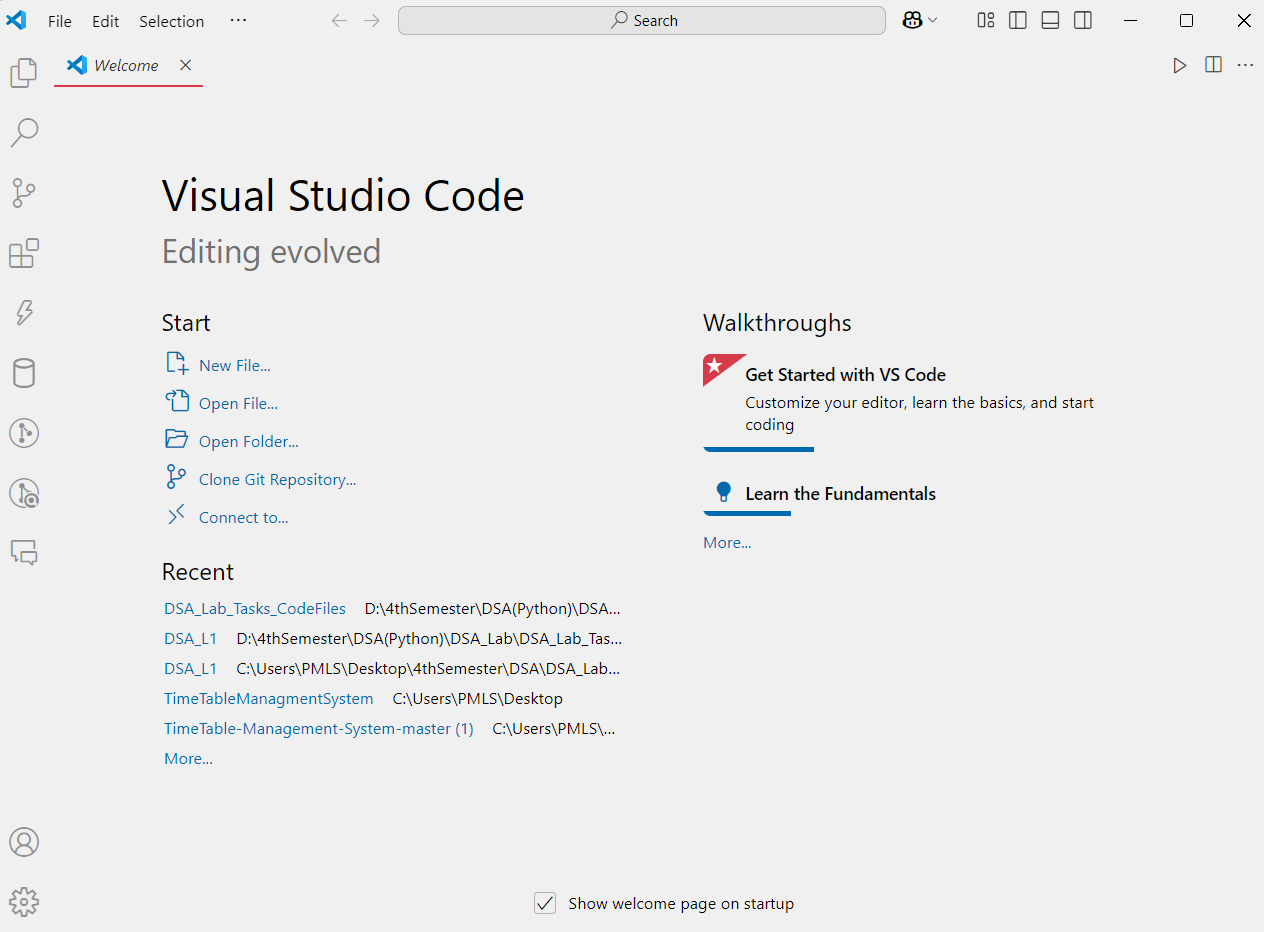
[**https://www.python.org/downloads/**](https://www.python.org/downloads/)

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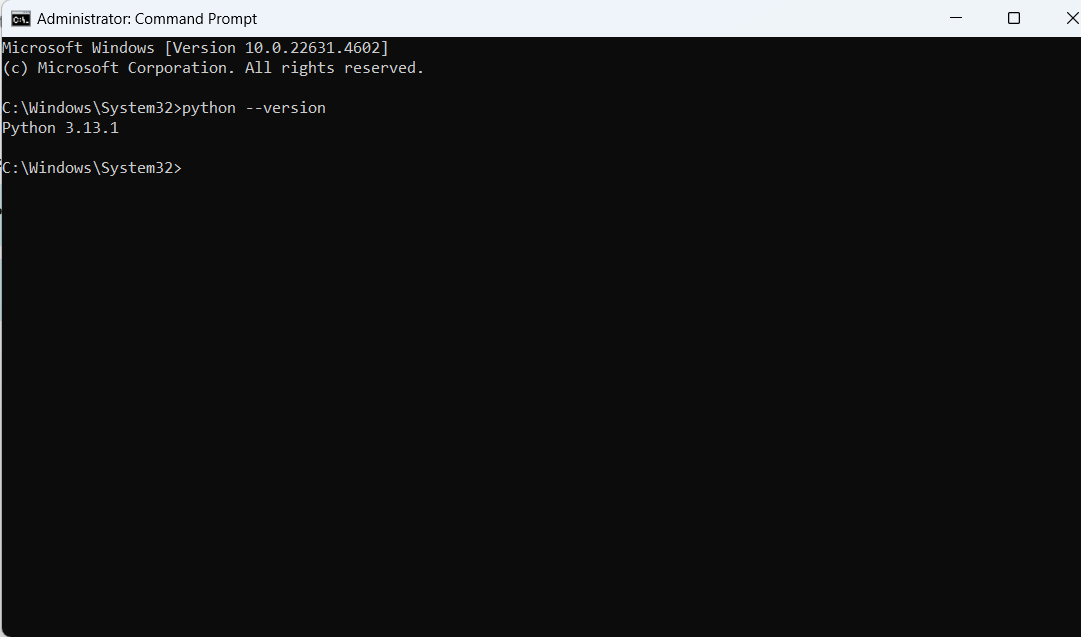
**Run the downloaded .exe file**

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* Installed VS code in my PC from[**https://code.visualstudio.com/**](https://code.visualstudio.com/)

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* Verified Python installation through command prompt

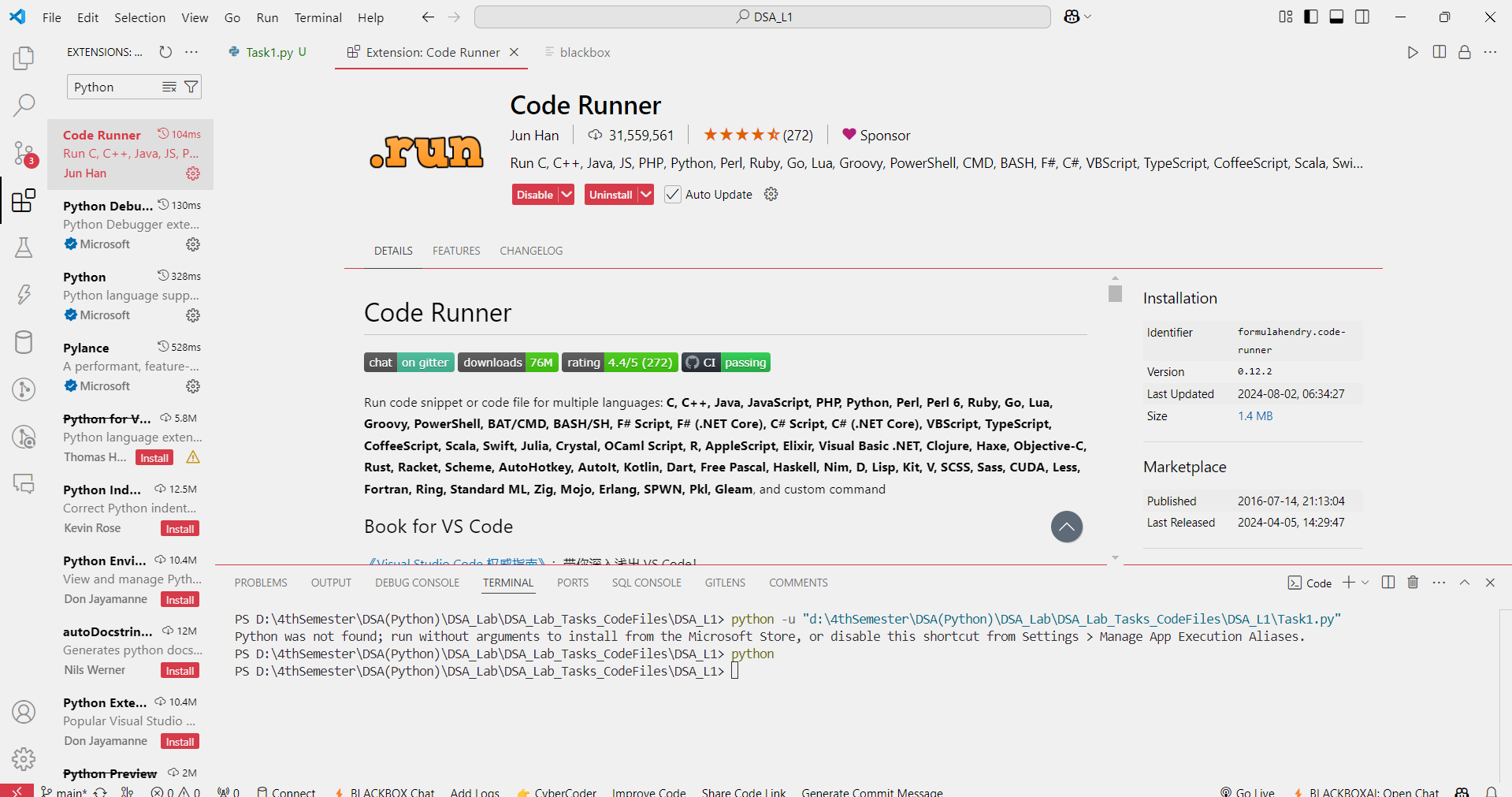
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* Installed Python & Code Runner extensions.

**A screenshot of a computer

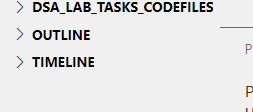
Description automatically generated**

**Python Extension**

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**Code Runner Extension**

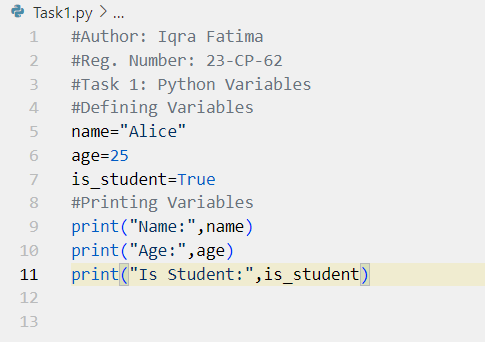
* I created separated space as DS\_Lab\_Tasks\_CodeFiles for my Labs Tasks.



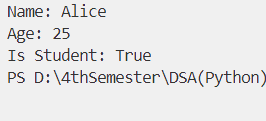
## **Guided Tasks**

### Task 1:

#### Code:

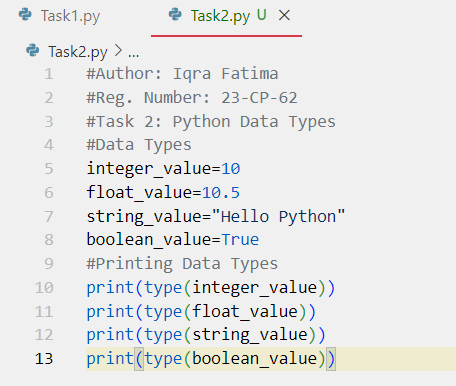
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#### Output:

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### Task 2:

#### Code:

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#### Output:

**A screenshot of a computer screen

Description automatically generated**

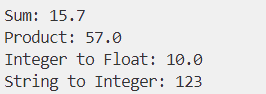
### Task3:

#### Code:

**A screenshot of a computer program

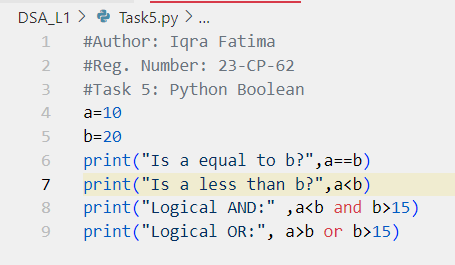
Description automatically generated**

#### Output:

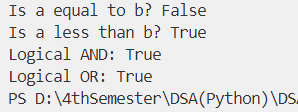


### Task 4:

#### Code:

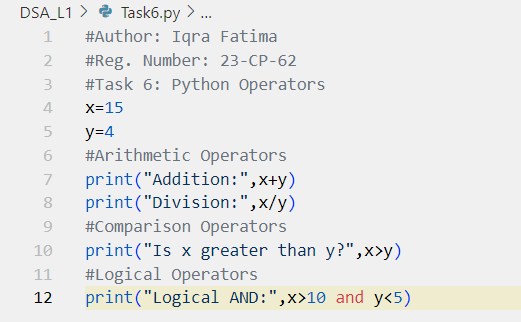
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#### Output:

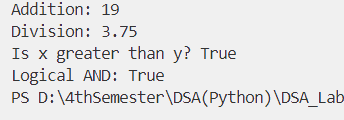
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### Task 6:

#### Code:

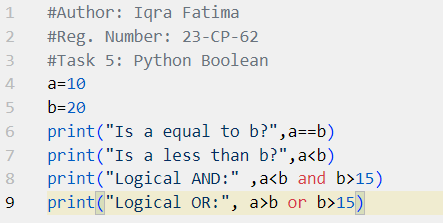
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#### Output:

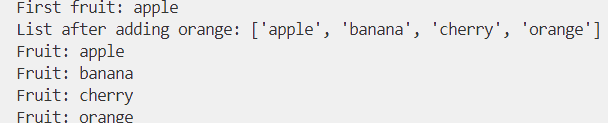
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### Task 7:

#### Code:

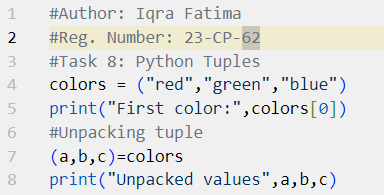
****

#### Output:

****

### Task 8:

#### Code:

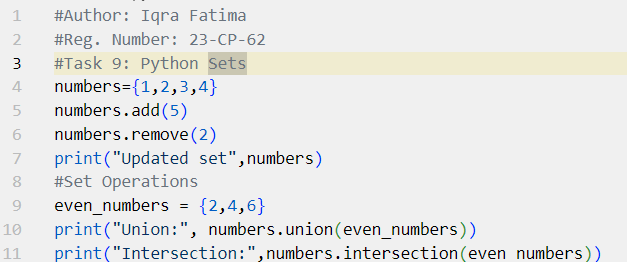
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#### Output:

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### Task 9:

#### Code:

****

#### Output:

**A close-up of numbers

Description automatically generated**

### Task 10:

#### Code:

**A screen shot of a computer

Description automatically generated**

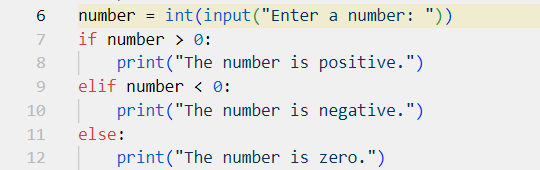
#### Output:

**A white background with black text

Description automatically generated**

### Task 11:

#### Code:

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#### Output:

****

### Task 12:

#### Code:

**A screenshot of a computer code

Description automatically generated**

#### Output:

**A number with black text

Description automatically generated with medium confidence**

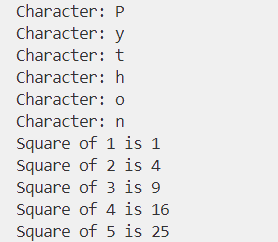
### Task 13:

#### Code:

**A screenshot of a computer code

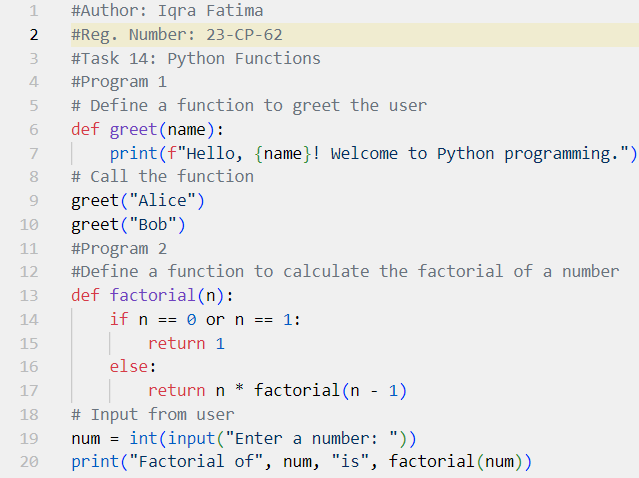
Description automatically generated**

#### Output:

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### Task 14:

#### Code:

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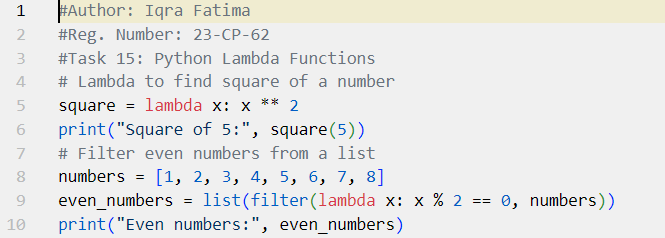
#### Output:

**A white background with black text

Description automatically generated**

### Task 15:

#### Code:

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#### Output:

**A screenshot of a computer

Description automatically generated**

## **Exercise**

### Question 1: Check Positive or Negative

Write a program that takes a number as input and checks whether it is positive, negative, or zero.

#### Code:

number=int(input("Enter a number: "))

if number>0:

    print("The number is positive")

elif number<0:

    print("The number is negative")

else:

    print("The number is zero")

#### Output:



### Question 2: Calculate the Sum of Two Numbers

Write a program to take two numbers as input and print their sum.

#### Code:

#### Output:

### Question 3: Find the Maximum of Three Numbers

Write a program to input three numbers and print the largest one.

#### Code:

#### Output:

### Question 4: Reverse a String

Write a program to reverse a string input by the user.

#### Code:

#### Output:

### Question 5: Check for Even or Odd Number

Write a program to check if a number is even or odd.

#### Code:

#### Output:

### Question 6: Print Multiplication Table

Write a program to print the multiplication table for a given number (from 1 to 10).

#### Code:

#### Output:

### Question 7: Convert Celsius to Fahrenheit

Write a program to convert a temperature from Celsius to Fahrenheit using the formula:

*Fahrenheit = (Celsius x 9 / 5 ) + 32*

#### Code:

#### Output:

### Question 8: Count the Vowels in a String Write a program to count the number of vowels in a string the user provides.

#### Code:

#### Output:

Question 9: Calculate the Factorial of a Number  
Write a program to calculate the factorial of a number using a loop.

#### Code:

#### Output:

Question 10: Find Prime Numbers in a Range  
Write a program to print all prime numbers between 1 and 50.

#### Code:

#### Output: