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Internship Domain : Python Internee

Task Week : 3rd

Instructor Name : Hassan Ali

Task 1 :

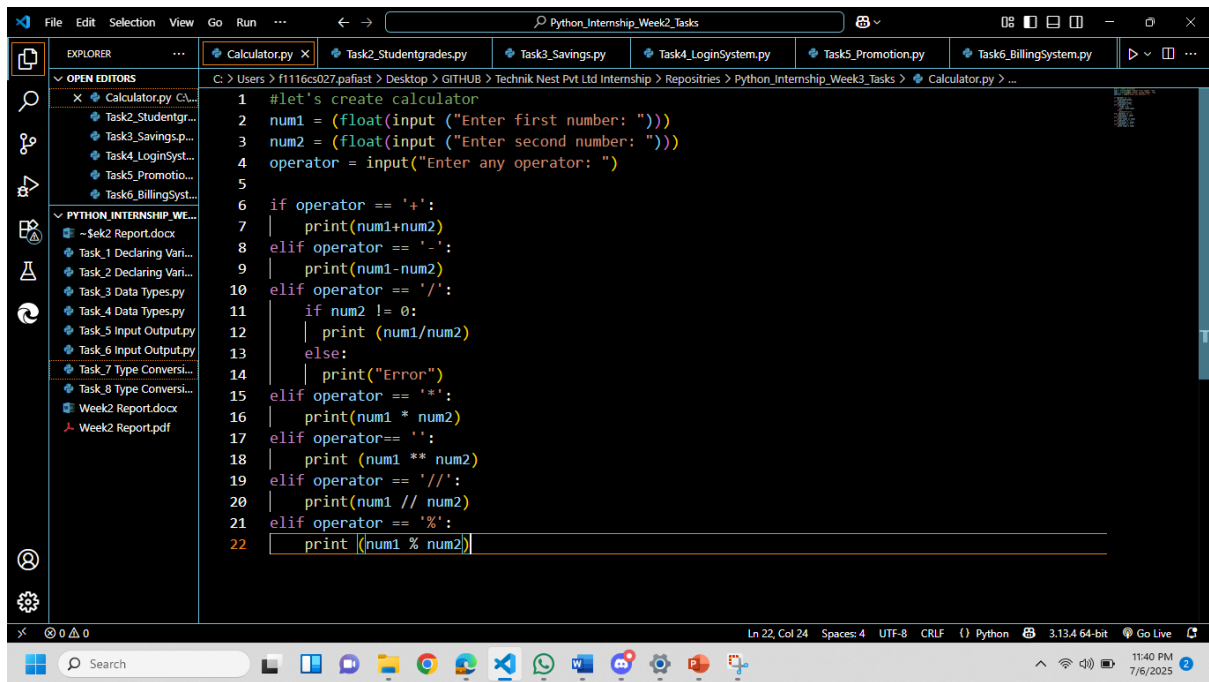Create a calculator that accepts two numbers and an operator (+, -, *, /, %, //, **).

Perform the operation and display the result.
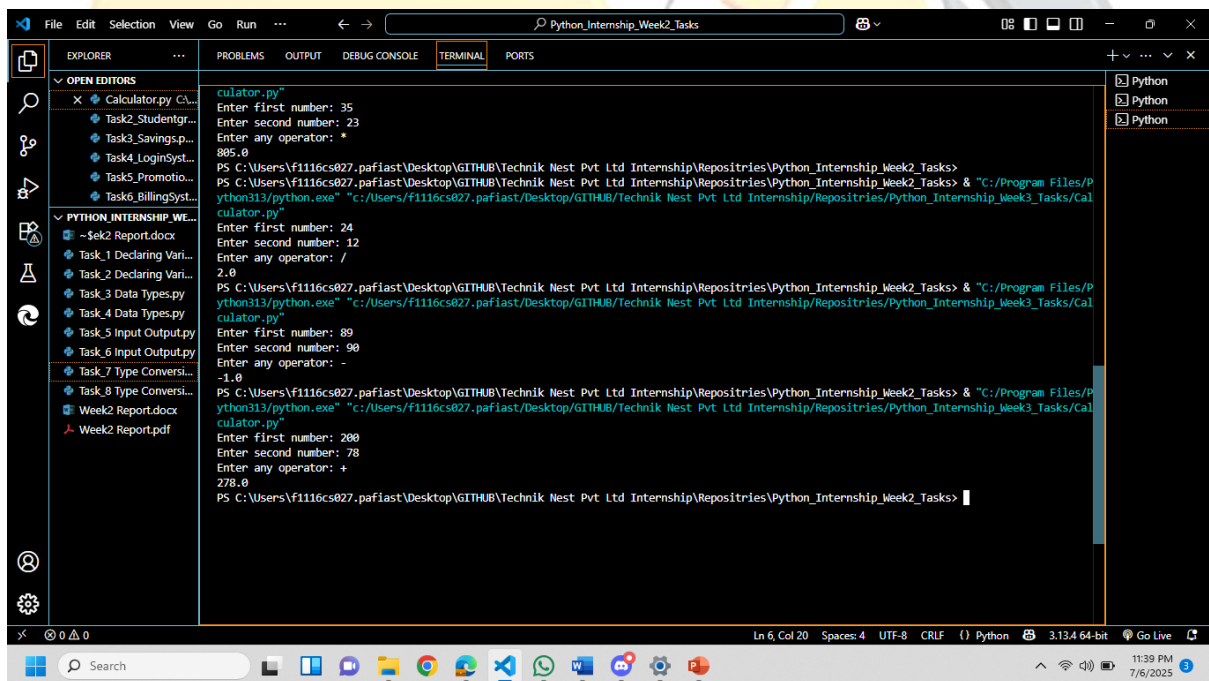
Handle division by zero safely.

Solution :

Code Snippet & Screenshot

```python
#let's create calculator

num1 = (float(input ("Enter first number: ")))

num2 = (float(input ("Enter second number: ")))

operator = input("Enter any operator: ")

if operator == '+':

    print(num1+num2)

elif operator == '-':

    print(num1-num2)

elif operator == '/':

    if num2 != 0:

        print (num1/num2)

    else:

        print("Error")

elif operator == '*':

    print(num1 * num2)

elif operator== ":

    print (num1 ** num2)

elif operator == '//':

    print(num1 // num2)

elif operator == '%':

    print (num1 % num2)
```

```python
#let's create calculator
num1 = (float(input ("Enter first number: ")))
num2 = (float(input ("Enter second number: ")))
operator = input("Enter any operator: ")

if operator == '+':
    print(num1+num2)
elif operator == '-':
    print(num1-num2)
elif operator == '/':
    if num2 != 0:
        print (num1/num2)
    else:
        print("Error")
elif operator == '*':
    print(num1 * num2)
elif operator== '':
    print (num1 ** num2)
elif operator == '//':
    print(num1 // num2)
elif operator == '%':
    print (num1 % num2)
```



```
culator.py"
Enter first number: 35
Enter second number: 23
Enter any operator: *
805.0
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks>
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafiast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week3_Tasks/Cal
culator.py"
Enter first number: 24
Enter second number: 12
Enter any operator: /
2.0
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafiast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week2_Tasks/Cal
culator.py"
Enter first number: 89
Enter second number: 90
Enter any operator: -
-1.0
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafiast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week3_Tasks/Cal
culator.py"
Enter first number: 200
Enter second number: 78
Enter any operator: +
278.0
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks>
```

Explanation:

- First I ask user for their desired number and operator.
- Then applied if/else condition for operands.
- I also add division by 0 safely.

Task 2 :

Take marks of 3 subjects.

Calculate total, percentage and assign grade:

A (>=85), B (>=70), C (>=50), Fail (<50).

Solution :

Code Snippet & Screenshot

```python
#calculate percentage and assign grades
sub1 = float(input ("Enter Maths marks: "))
sub2 = float(input ("Enter English marks: "))
sub3 = float(input ("Enter Biology marks: "))
Total_marks = sub1 + sub2 + sub3
print("Total marks = ", Total_marks)
Percentage = (Total_marks / 300) * 100
print ("Percentage Obtained = " , Percentage)
#now let's assign grades
if Percentage >= 85:
    print("Grade A")
elif Percentage >= 70:
    print ("Grade B")
elif Percentage >= 50:
    print ("Grade C")
else:
    print ("Grade F")
```

```python
1   #calculate percentage and assign grades
2   sub1 = float(input ("Enter Maths marks: "))
3   sub2 = float(input ("Enter English marks: "))
4   sub3 = float(input ("Enter Biology marks: "))
5   Total_marks = sub1 + sub2 + sub3
6   print("Total marks = ", Total_marks)
7   Percentage = (Total_marks / 300) * 100
8   print ("Percentage Obtained = " , Percentage)
9   #now let's assign grades
10  if Percentage >= 85:
11      print("Grade A")
12  elif Percentage >= 70:
13      print ("Grade B")
14  elif Percentage >= 50:
15      print ("Grade C")
16  else:
17      print ("Grade F")
```



```
k2_Studentgrades.py"
Enter Maths marks: 99
Enter English marks: 77
Enter Biology marks: 56
Total marks =  232.0
Percentage Obtained =  77.3333333333333
Grade B
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafiast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week3_Tasks/Tas
k2_Studentgrades.py"
Enter Maths marks: 90
Enter English marks: 90
Enter Biology marks: 85
Total marks =  265.0
Percentage Obtained =  88.3333333333333
Grade A
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafiast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week3_Tasks/Tas
k2_Studentgrades.py"
Enter Maths marks: 45
Enter English marks: 37
Enter Biology marks: 89
Total marks =  171.0
Percentage Obtained =  56.99999999999999
Grade C
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafiast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week3_Tasks/Tas
k2_Studentgrades.py"
Enter Maths marks: 32
Enter English marks: 56
Enter Biology marks: 23
Total marks =  111.0
Percentage Obtained =  37.0
Grade F
PS C:\Users\f1116cs027.pafiast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks>
```

Explanation:

- Take 3 subjects marks from user.
- Calculate their percentage.
- And assign grades using if/else.

Task 3 :

Ask user for monthly income and expenses.
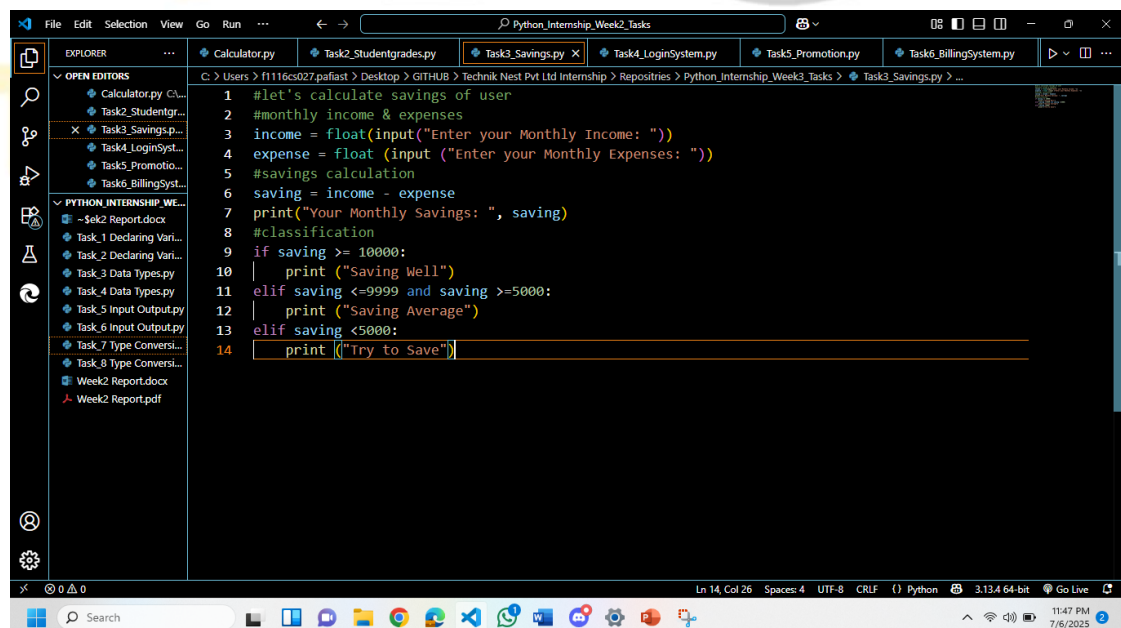
Calculate savings and classify:

>10000 = Saving Well, 5000–9999 = Average, <5000 = Try to Save.

Solution :

Code Snippet & Screenshot

```python
#let's calculate savings of user
#monthly income & expenses
income = float(input("Enter your Monthly Income: "))
expense = float (input ("Enter your Monthly Expenses: "))
#savings calculation
saving = income - expense
print("Your Monthly Savings: ", saving)
#classification
if saving >= 10000:
    print ("Saving Well")
elif saving <=9999 and saving >=5000:
    print ("Saving Average")
elif saving <5000:
    print ("Try to Save")
```
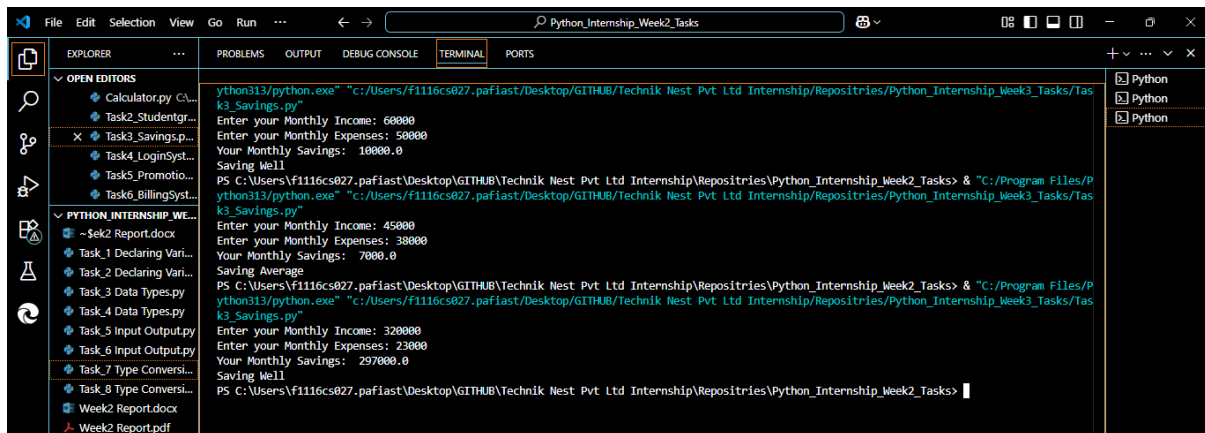
Explanation:

- Take salaries and expenses from emplyees.
- Calculate their savings and suggest their savings chart by using if/else to check either they are good enough in savings or not.

Task 4 :

Build a login system. Ask username & password.

If username = 'admin' and password = '1234', print Access Granted.

Else, Access Denied.

Solution :

Code Snippet & Screenshot
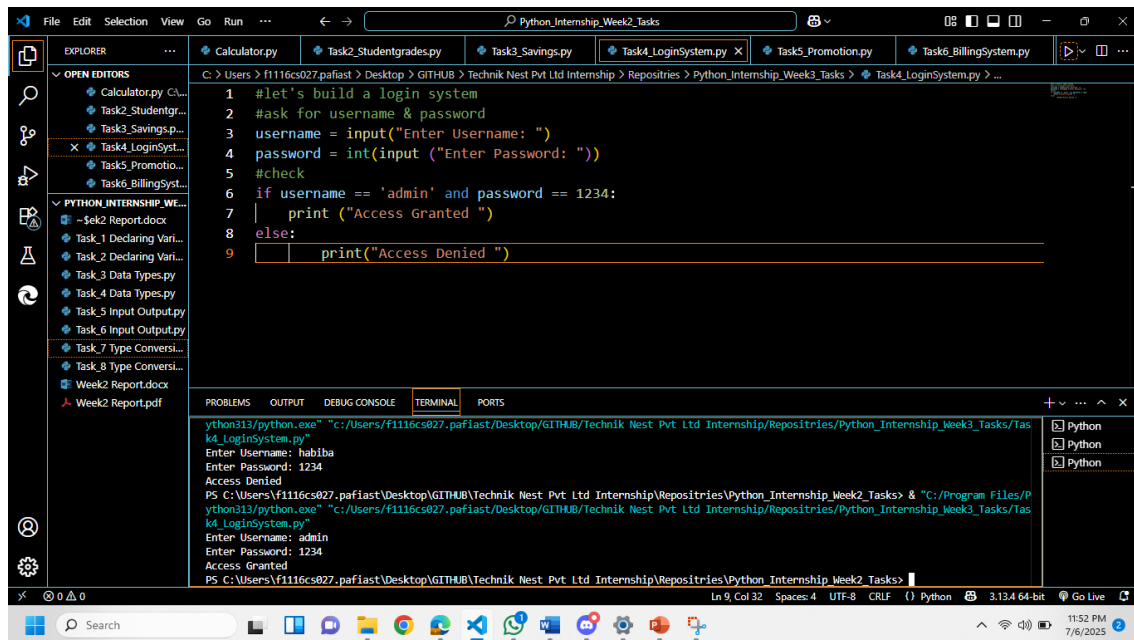
```
#let's build a login system

#ask for username & password

username = input("Enter Username: ")

password = int(input ("Enter Password: "))

#check

if username == 'admin' and password == 1234:

    print ("Access Granted ")

else:

     print("Access Denied ")
```

Explanation:

- Set username and password.
- No one can get access until their name and password does not maches.

Task 5 :

Ask user for attendance (%) and final marks.

If attendance ≥ 75 and marks ≥ 50 → Promote

Else → Not promoted.

Solution :

Code Snippet & Screenshot

```
#let's promote students

percentage = float(input("Enter your Attendance Percentage: "))

final_marks = float(input("Enter your Final Marks: "))

#criteria tu promote

if percentage >= 75 and final_marks >=50:

    print("..Congratulations! You are promoted to Next Semester..")

else:

    print ("Promotion Denied ")
```
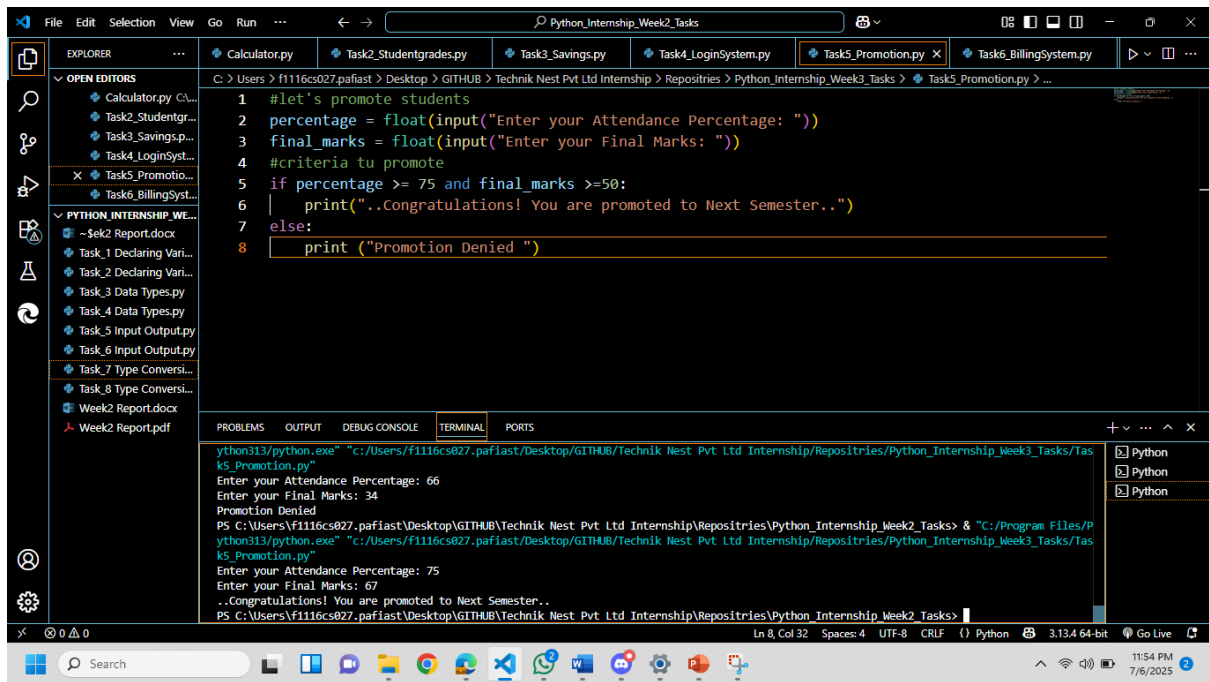
Explanation:

- Take percentage & final marks from user.
- Using if/else mark their criteria.
- And promoted them on the basis of their percentage & final marks.

Task 6 :

Billing system:

Take number of products and total price.

If price > 1000 and products > 3 → 15% discount

If price > 500 → 10% discount

Else → No discount.

Show final bill.

Solution :

Code Snippet & Screenshot

```python
#let's code a billing system

product = int(input("No. Of Products: "))

price = float(input ("Total Price: "))

#now apply discount

if price > 1000 and product > 3:

    discount = price * 0.15

    final_price = price - discount

    print ("You got 15% OFF")

    print ("Final Price after Discount = ", final_price)

elif  price > 500:

    discount = price * 0.10

    final_price = price - discount

    print ("You got 10% OFF ")

    print ("Final Price after Discount = ", final_price)

else:


    print ("No Discount applied ", price)
```
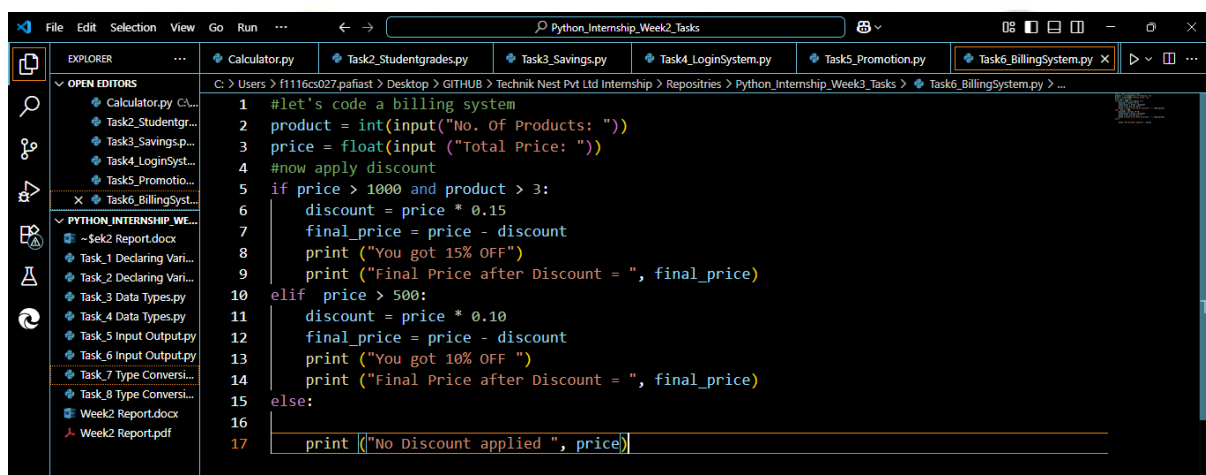
Explanation:

- Created a billing system.
- Takes no of products & price from user.
- And apply discount on them using the set criteria.