



TECHNIK NEST

INNOVATIVE MINDS, NESTING SUCCESS

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Internship Domain : Python Internee

Task Week : 3rd

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Task 1 :

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

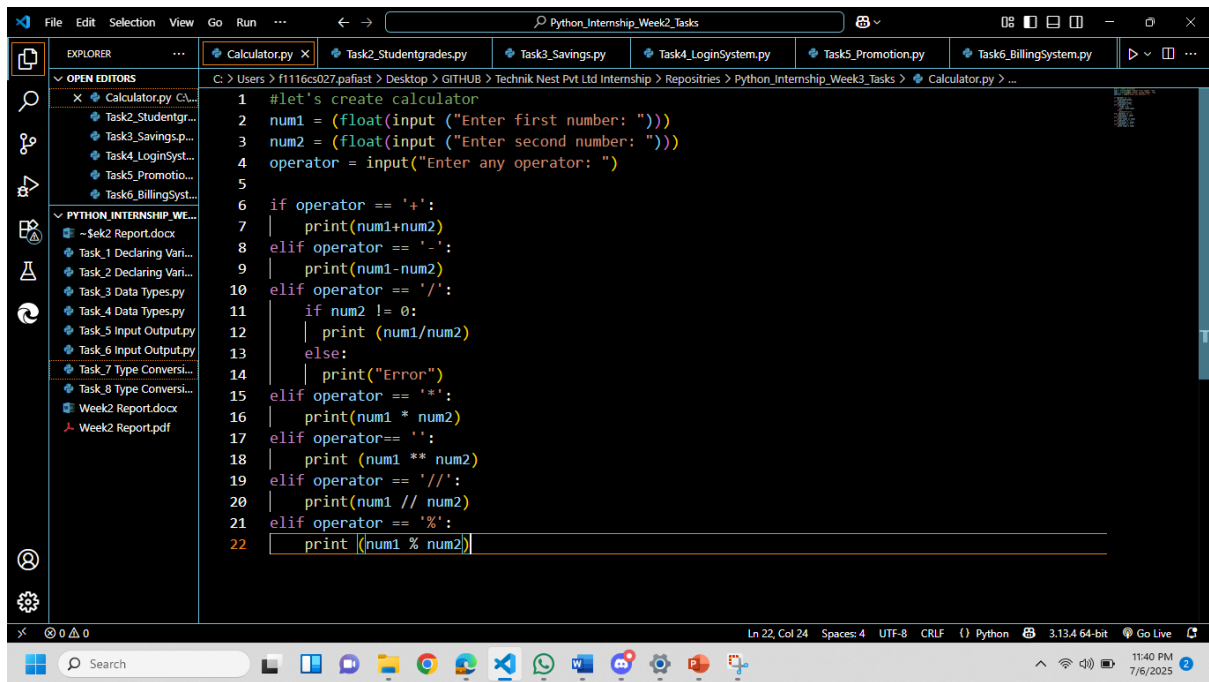
Perform the operation and display the result.

Handle division by zero safely.

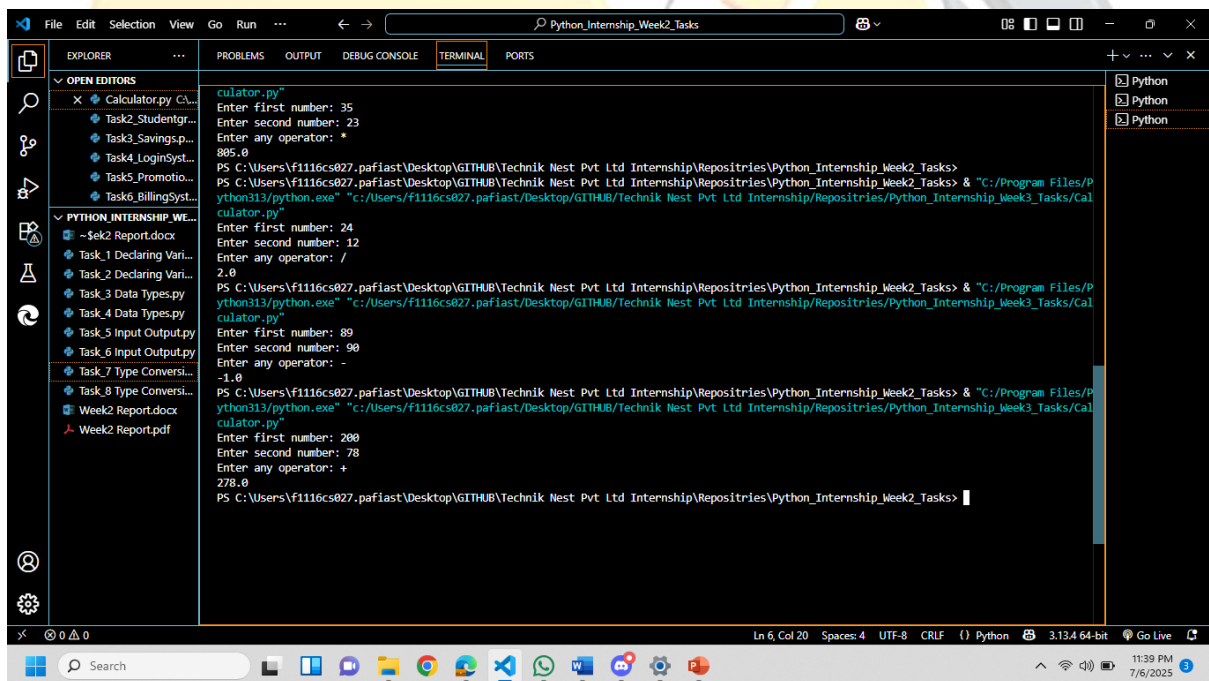
Solution :

Code Snippet & Screenshot

```
#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)
```



```
1 #let's create calculator
2 num1 = (float(input ("Enter first number: ")))
3 num2 = (float(input ("Enter second number: ")))
4 operator = input("Enter any operator: ")
5
6 if operator == '+':
7     | print(num1+num2)
8 elif operator == '-':
9     | print(num1-num2)
10 elif operator == '/':
11     | if num2 != 0:
12         | print (num1/num2)
13     else:
14         | print("Error")
15 elif operator == '*':
16     | print(num1 * num2)
17 elif operator== '^':
18     | print (num1 ** num2)
19 elif operator == '//':
20     | print(num1 // num2)
21 elif operator == '%':
22     | print ((num1 % num2))
```



```
culator.py"
Enter first number: 35
Enter second number: 23
Enter any operator: *
805.0
PS C:\Users\F1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks>
PS C:\Users\F1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafias/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.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafias/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositries/Python_Internship_Week3_Tasks/Cal
culator.py"
Enter first number: 89
Enter second number: 90
Enter any operator: -
-1.0
PS C:\Users\F1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafias/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.pafias\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

```
#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")
```

The screenshot shows the Visual Studio Code editor with the file explorer on the left and the code editor in the center. The file explorer shows a project named 'PYTHON_INTERNSHIP_WEEK2_Tasks' with several files including 'Task2_Studentgrades.py'. The code editor displays the following Python code:

```
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")
```

The screenshot shows the Visual Studio Code terminal window with the output of the Python script. The terminal displays the following output:

```
PS C:\Users\vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
python313/python.exe" "c:/Users/vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks/Tas
k2_Studentgrades.py"
Enter Maths marks: 90
Enter English marks: 77
Enter Biology marks: 56
Total marks = 223.0
Percentage Obtained = 77.33333333333333
Grade B
PS C:\Users\vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
python313/python.exe" "c:/Users/vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks/Tas
k2_Studentgrades.py"
Enter Maths marks: 90
Enter English marks: 90
Enter Biology marks: 85
Total marks = 265.0
Percentage Obtained = 88.33333333333333
Grade A
PS C:\Users\vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
python313/python.exe" "c:/Users/vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_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\vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_Tasks> & "C:/Program Files/P
python313/python.exe" "c:/Users/vf116cs027.paf\ Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositries\Python_Internship_Week2_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\vf116cs027.paf\ 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.

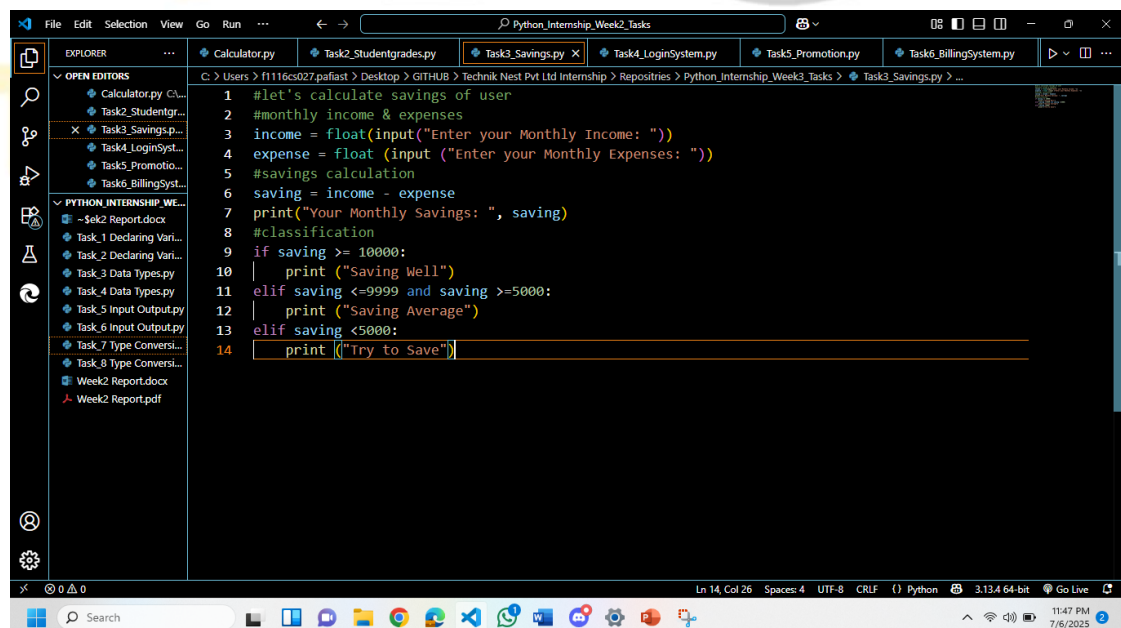
Calculate savings and classify:

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

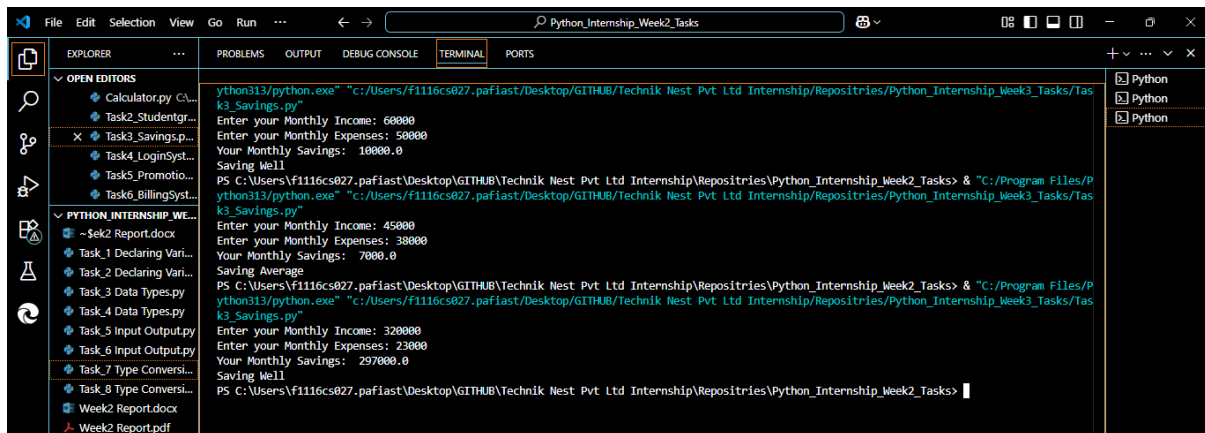
Solution :

Code Snippet & Screenshot

```
#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")
```

A screenshot of a Python IDE (VS Code) showing the code for Task 3. The file explorer on the left shows a project named 'PYTHON_INTERNSHIP_WEEK2' with various files and folders. The main editor window displays the code snippet from the previous block. The status bar at the bottom indicates the file is 'Ln 14, Col 26' and the encoding is 'UTF-8'. The taskbar at the very bottom shows the system clock as 11:47 PM on 7/6/2025.

```
File Edit Selection View Go Run ... Python_Internship_Week2_Tasks
EXPLORER
OPEN EDITORS
Calculator.py C:\...
Task2_Studentgr...
Task3_Savings.py
Task4_LoginSyst...
Task5_Promotio...
Task6_BillingSyst...
PYTHON_INTERNSHIP_WEEK2
-Week2_Report.docx
Task_1_Declaring Vari...
Task_2_Declaring Vari...
Task_3_Data Types.py
Task_4_Data Types.py
Task_5_Input Output.py
Task_6_Input Output.py
Task_7_Type Conversi...
Task_8_Type Conversi...
Week2_Report.docx
Week2_Report.pdf
C:\Users> f1116cs027.pafast > Desktop > GITHUB > Technik Nest Pvt Ltd Internship > Repositories > Python_Internship_Week3_Tasks > Task3_Savings.py > ...
1 #let's calculate savings of user
2 #monthly income & expenses
3 income = float(input("Enter your Monthly Income: "))
4 expense = float(input("Enter your Monthly Expenses: "))
5 #savings calculation
6 saving = income - expense
7 print("Your Monthly Savings: ", saving)
8 #classification
9 if saving >= 10000:
10 |     print("Saving Well")
11 elif saving <=9999 and saving >=5000:
12 |     print("Saving Average")
13 elif saving <5000:
14 |     print("Try to Save")
Ln 14, Col 26 Spaces: 4 UTF-8 CRLF Python 3.13.4 64-bit Go Live
11:47 PM 7/6/2025
```



Explanation:

- Take salaries and expenses from employees.
- 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

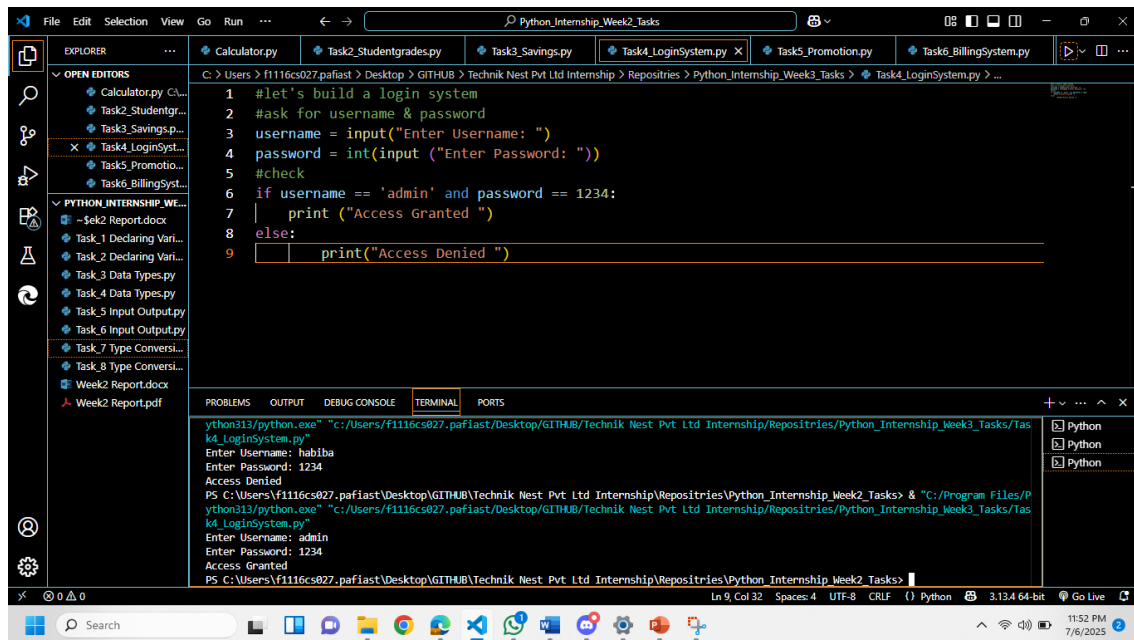
```

#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 ")

```

The screenshot shows a Visual Studio Code editor window with a file explorer on the left and a terminal at the bottom. The file explorer shows a project named 'Python_Internship_Week2_Tasks' with several Python files. The terminal shows the execution of a Python script named 'Task4_LoginSystem.py'. The script prompts for a username and password. The first attempt with username 'habiba' and password '1234' results in 'Access Denied'. The second attempt with username 'admin' and password '1234' results in 'Access Granted'.

```
1 #let's build a login system
2 #ask for username & password
3 username = input("Enter Username: ")
4 password = int(input("Enter Password: "))
5 #check
6 if username == 'admin' and password == 1234:
7     print("Access Granted ")
8 else:
9     print("Access Denied ")
```

Terminal Output:

```
python313/python.exe "c:/Users/f1116cs827.pafia/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Internship_Week3_Tasks/Task4_LoginSystem.py"
Enter Username: habiba
Enter Password: 1234
Access Denied
PS C:\Users\f1116cs827.pafia\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Internship_Week3_Tasks> & "C:/Program Files/Python313/python.exe" "c:/Users/f1116cs827.pafia/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Internship_Week3_Tasks/Task4_LoginSystem.py"
Enter Username: admin
Enter Password: 1234
Access Granted
PS C:\Users\f1116cs827.pafia\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Internship_Week3_Tasks>
```

Explanation:

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

Task 5 :

Ask user for attendance (%) and final marks.

If attendance ≥ 75 and marks $\geq 50 \rightarrow$ Promote

Else \rightarrow 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: "))

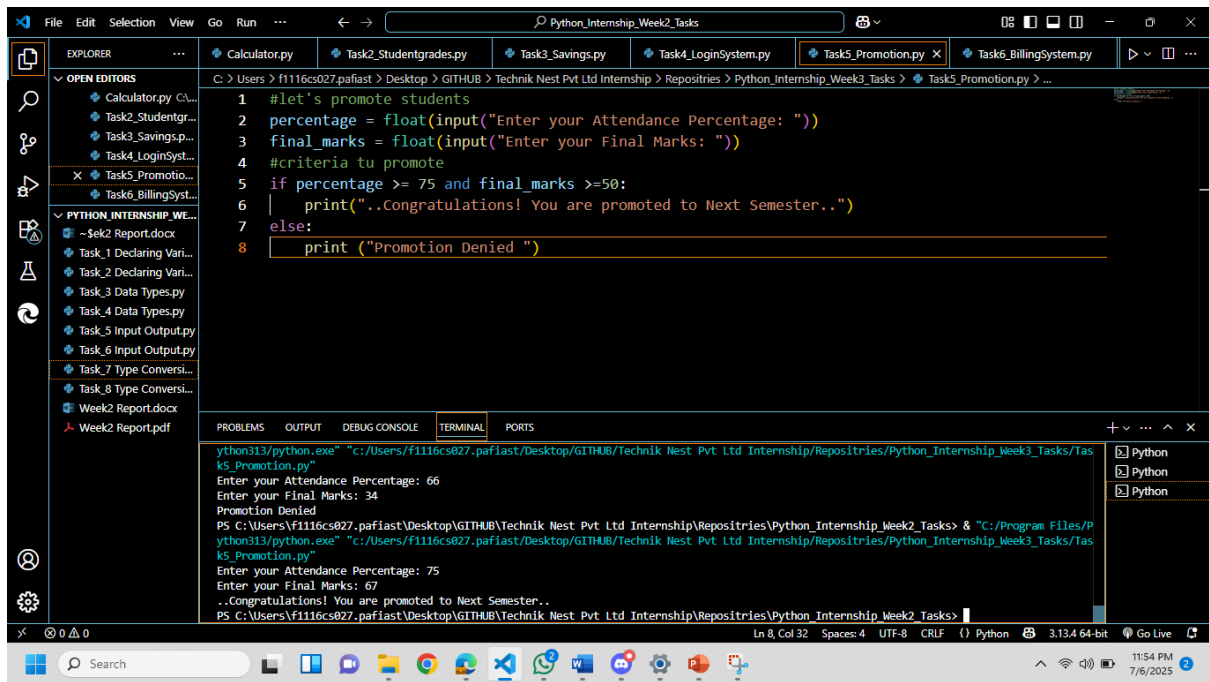
#criteria to promote

if percentage >= 75 and final_marks >= 50:

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

else:

    print("Promotion Denied ")
```

```
1 #let's promote students
2 percentage = float(input("Enter your Attendance Percentage: "))
3 final_marks = float(input("Enter your Final Marks: "))
4 #criteria to promote
5 if percentage >= 75 and final_marks >= 50:
6     print("..Congratulations! You are promoted to Next Semester..")
7 else:
8     print ("Promotion Denied ")
```

Terminal Output:

```
python313/python.exe "c:/Users/f1116cs027.pafast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Internship_Week3_Tasks/Tas
k5_Promotion.py"
Enter your Attendance Percentage: 66
Enter your Final Marks: 34
Promotion Denied
PS C:\Users\f1116cs027.pafast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Internship_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafast/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Internship_Week3_Tasks/Tas
k5_Promotion.py"
Enter your Attendance Percentage: 75
Enter your Final Marks: 67
..Congratulations! You are promoted to Next Semester..
PS C:\Users\f1116cs027.pafast\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Internship_Week2_Tasks>
```

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

#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
```

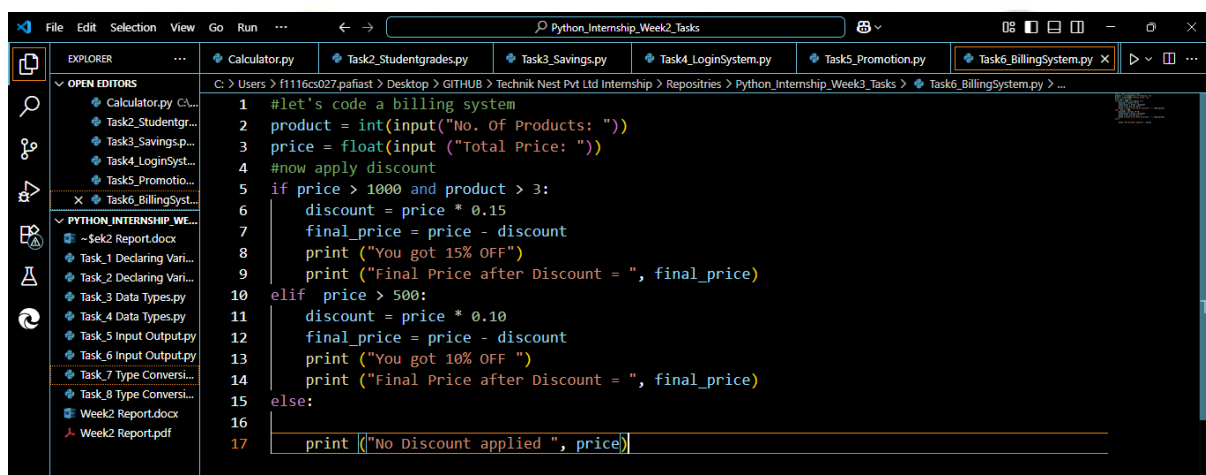
```
    final_price = price - discount
```

```
    print ("You got 10% OFF ")
```

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

else:

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



The screenshot shows a code editor window titled 'Python_Internship_Week2_Tasks'. The file explorer on the left shows a project structure with files like 'Calculator.py', 'Task2_Studentgrades.py', 'Task3_Savings.py', 'Task4_LoginSystem.py', 'Task5_Promotion.py', and 'Task6_BillingSystem.py'. The main editor area displays the Python code for the billing system, which is identical to the code snippet provided above. The code is written in a dark-themed editor with syntax highlighting.

```
python313/python.exe "c:/Users/f1116cs027.pafias/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Week2_Tasks/Tas k6_BillingSystem.py"
No. Of Products: 3
Total Price: 1600
You got 18% OFF
Final Price after Discount =  900.0
PS C:\Users\f1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafias/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Week2_Tasks/Tas k6_BillingSystem.py"
No. Of Products: 2
Total Price: 700
You got 16% OFF
Final Price after Discount =  630.0
PS C:\Users\f1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafias/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Week2_Tasks/Tas k6_BillingSystem.py"
No. Of Products: 4
Total Price: 12
No Discount applied  12.0
PS C:\Users\f1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Week2_Tasks>
PS C:\Users\f1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Week2_Tasks> & "C:/Program Files/P
ython313/python.exe" "c:/Users/f1116cs027.pafias/Desktop/GITHUB/Technik Nest Pvt Ltd Internship/Repositories/Python_Week2_Tasks/Tas k6_BillingSystem.py"
No. Of Products: 6
Total Price: 1900
You got 15% OFF
Final Price after Discount =  1615.0
PS C:\Users\f1116cs027.pafias\Desktop\GITHUB\Technik Nest Pvt Ltd Internship\Repositories\Python_Week2_Tasks>
```

Explanation:

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

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