

ASSIGNMENT 4

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Case Study 1: Online Shopping Cart

A customer adds multiple items to an online shopping cart. Each item has a price, and there is a discount based on the total amount spent. The platform needs to calculate the final bill after applying discounts.

```
item1=int(input("Enter the item1 "));
item2=int(input("Enter the item2 "));
item3=int(input("Enter the item3 "));
tot=item1+item2+item3;
if tot>500:
    dis=(tot)*(10/100);
    amt=tot-int(dis);
    print("The total amount after discount "+str(amt));
else:
    print("The total amount "+tot);
```

OUTPUT:

Enter the item1 200

Enter the item2 300

Enter the item3 500

The total amount after discount 900

Case Study 2: Electricity Bill Calculator

Scenario:

A household receives an electricity bill based on units consumed. The billing rates are as follows:

- Up to 100 units: \$0.5 per unit
- 101 to 300 units: \$0.75 per unit
- Above 300 units: \$1 per unit

```
unit=int(input("Enter the units "));  
  
if(unit<=100):  
  
    amt=unit*0.5;  
  
elif(unit>100 and unit<=300):  
  
    amt=unit*0.75;  
  
else:  
  
    amt=unit*1;  
  
print("The total amount = "+str(amt));
```

OUTPUT:

Enter the units 50

The total amount = 25.0

Case Study 3: Student Attendance Tracker

Scenario:

A school needs a system to track student attendance. A student is marked present if they attend at least 75% of the total classes; otherwise, they are marked Absent;.

```
tot_class=int(input("Enter the total number of classes "));  
  
class_att=int(input("Enter the total of classes attended "));
```

```
percent=(class_att/tot_class)*100;
```

```
if percent>=75:
```

```
    print("Present ");
```

```
else:
```

```
    print("Absent ");
```

OUTPUT:

Enter the total number of classes 50

Enter the total of classes attended 25

Absent

Case Study 12: Leap Year Checker

Scenario:

A calendar application needs to determine whether a given year is a leap year.

```
year=int(input("Enter the year "));
```

```
if(year%400==0) or (year%4==0 and year%100!=0):
```

```
    print("The given year is leap year ");
```

```
else:
```

```
    print("The given year is not a leap year");
```

OUTPUT:

Enter the year 1996

The given year is leap year