1) Create a program that calculates the total cost of items purchased at a store. Prompt the user to enter the quantity and price of each item, and use operators and conditional statements to calculate the total cost. Display the final cost to the user.

In [103…

```
Total_items=[]
Total_cost=[]
bill=[]


Quantity=int(input("How Many Items Do You Want = "))

for i in range(0,Quantity):
    add_items=input("Enter The Product name = ")
    add_price=int(input("Enter The Price = "))
    quantity=int(input("Enter the Quantity = "))
    Total_items.append(add_items)
    Total_cost.append(add_price)
    total=add_price*quantity
    bill.append(total)




y = zip(Total_items,bill)
print("Your Bill = ",dict(y))

x=0
for j in bill:
    x=j+x
print("Your Bill Amount is = ",x)
```

```
How Many Items Do You Want = 3
Enter The Product name = apple
Enter The Price = 100
Enter the Quantity = 5
Enter The Product name = orange
Enter The Price = 250
Enter the Quantity = 4
Enter The Product name = mango
Enter The Price = 50
Enter the Quantity = 6
Your Bill =  {'apple': 500, 'orange': 1000, 'mango': 300}
Your Bill Amount is =  1800
```

2) Develop a program that takes a user's grade as input and provides a corresponding letter grade. Use conditional statements to check different ranges of grades and assign the appropriate letter grade (e.g., A, B, C) based on the input.

In [28]:

```
mark_list=[]
subject_list=[]
grades=[]


subjects=int(input("How Many subjects = "))

for i in range(0,subjects):
    add_subject=input("Enter The subject name = ")
    mark=int(input("Enter The Mark = "))
    subject_list.append(add_subject)
    mark_list.append(mark)

    if mark>=90  and mark<=100:
        print("you got A+")
        grades.append("A+")
    elif mark>=80  and mark<=89:
        print("you got A")
        grades.append("A")


    elif mark>=70  and mark<=79:
        print("you got B+")
        grades.append("B+")

    elif mark>=60  and mark<=69:
        print("you got B")
        grades.append("B")

    elif mark>=50  and mark<=59:
        print("you got C")
        grades.append("C")

    else:
        print("Your fail")
        grades.append("Fail")

y = zip(subject_list,grades)
print("Your Mark List = ",dict(y))
```

```
How Many subjects = 5
Enter The subject name = Malayalam
Enter The Mark = 98
you got A+
Enter The subject name = English
Enter The Mark = 85
you got A
Enter The subject name = Hindi
Enter The Mark = 74
you got B+
Enter The subject name = Maths
Enter The Mark = 38
Your fail
Enter The subject name = science
Enter The Mark = 79
you got B+
Your Mark List =  {'Malayalam': 'A+', 'English': 'A', 'Hindi': 'B+', 'Maths': 'Fail', 'science': 'B+'}
```

Create a program that calculates the area and circumference of a circle. Prompt the user to enter the radius of the circle, and use the appropriate operators and conditional statements to calculate and display the area and circumference.

In [19]:

```
pi=3.14

radius=float(input("Enter The Radius value = "))
area=2*pi
Circumference=2*pi*radius

print("Area of the Circle = ",area)
print("Area of the Circumference = ",Circumference)
```

```
Enter The Radius value = 150.8
Area of the Circle =  6.28
Area of the Circumference =  947.0240000000001
```

4) Write a Python program that takes a user's age as input and determines if they are a child, teenager, adult, or senior citizen. Use conditional statements to check different age ranges and display the corresponding category based on the input

In [30]:

```
name=input("Enter Your name = ")
age=int(input("Enter Your Age = "))
if age>=1 and age<=5:
    print(name,"Your in babies category")
elif age>=6 and age<=16:
    print(name,"Your in childrens category")
elif age>=17 and age<=30:
    print(name,"Your in Young Adults category")
elif age>=31 and age<=45:
    print(name,"Your in Middle Adults Category")
elif age>=46 and age<=100:
    print(name,"Your In Old Adults category")
```

```
Enter Your name = Ajith
Enter Your Age = 26
Ajith Your in Young Adults category
```

5) Write a program that determines if a given year is a leap year or not using a nested if-else statement. Prompt the user to enter a year, and check if it is divisible by 4. If it is, check if it is divisible by 100 and not divisible by 400. Display an appropriate message indicating whether it is a leap year or not.

In [109…

```
year=int(input("Enter The Year = "))

if year % 400 == 0 or  year % 100 != 0 and  year % 4 == 0:
     print(year,"is a leap year")
else:
    print(year,"is not a leap year")
```

```
Enter The Year = 2004
2004 is a leap year
```

In [ ]: