**Assingment No.05**

Quention 1:- Write a program that asks the user to enter a length in centimetres. If the user enters a negative length, the program should tell the user that the entry is invalid. Otherwise, the program should convert the length to inches and print out the result. There are 2.54 centimetres in an inch.

In [3]:
```
num = eval(input("Enter a length in centimeter(Cm):- "))
if num <=0:
    print("You are entering invalid number.")
else:
    num1 = num*0.3937
    print(f"The result is:- {num1}")
```

```
The result is:- 0.999998
```

Quention 2:- Ask the user for a temperature. Then ask them what units, Celsius or Fahrenheit, the temperature is in. Your program should convert the temperature to the other unit. The conversions are F = 9 5 C +32 and C = 5 9 (F − 32).

In [45]:
```
temperature = eval(input("Enter a tempeture Value:- "))
unit = input("Is this temperature in Celsius(C) or Fahrenheit (F):- ")
if unit == "C":
    convert_temp = (9/5)*(temperature+32)
    print( f"It will converted into Fahrenheit is:- {convert_temp}")
elif unit =="F":
    convert_temp = (5/9)*(temperature-32)
    convert_temp1 = round(convert_temp,2)
    print(f"It will converted into Fahrenheit is:- {convert_temp1}")
else:
    print("Enter a valid Option")
```

```
It will converted into Fahrenheit is:- 7.22
```

QUE 3:- Ask the user to enter a temperature in Celsius. The program should print a message based on the temperature: • If the temperature is less than -273.15, print that the temperature is invalid because it is below absolute zero. • If it is exactly -273.15, print that the temperature is absolute 0. • If the temperature is between -273.15 and 0, print that the temperature is below freezing. • If it is 0, print that the temperature is at the freezing point. • If it is between 0 and 100, print that the temperature is in the normal range. • If it is 100, print that the temperature is at the boiling point. • If it is above 100, print that the temperature is above the boiling point.

In [46]:
```
temperature = eval(input(f"Enter a tempeture:- "))
print(f"The temperature in celsius is:- {temperature}")
if temperature < -273.15:
    print("The given temperature is invalid because it is below absolute zero.")
elif temperature <= -273.15:
    print("The temperature is absolute zero.")
elif temperature >= -273.15 and temperature <= 0:
    print("The temperature is below freezing.")
elif temperature == 0:
    print("The temperature is at the freezing point.")
elif temperature >= 0 and temperature <= 100:
```

```
    print("The temperature is in the normal range")
elif temperature == 100:
    print("The temperature is at the boiling point.")
elif temperature > 100:
    print("The temperature is above boiling point.")
```

```
The temperature in celsius is:- -224.25
The temperature is below freezing.
```

Que 04:- Write a program that asks the user how many credits they have taken. If they have taken 23 or less, print that the student is a freshman. If they have taken between 24 and 53, print that they are asophomore. The range for juniors is 54 to 83, and for seniors it is 84 and over.

In [9]:
```
credits = eval(input("How Many Credits you have taken:- "))
if credits <=23:
    print("The Student is a freshman")
elif credits >= 24 and credits <= 53:
    print("They are asophomore")
elif credits >= 54 and credits <= 83:
    print("The range for juniors")
else:
    print("The range for seniors")
```

```
The range for seniors
```

Que 5:- Generate a random number between 1 and 10. Ask the user to guess the number and print a message based on whether they get it right or not.

In [8]:
```
import random
num = random.randint(1,10)
user = eval(input("Guess the number:- "))
if user == num:
    print("You are right")
else:
    print("You are not right")
```

```
You are right
```

Que 6:- A store charges $12 per item if you buy less than 10 items. If you buy between 10 and 99 items, the cost is 10 per item. If you buy 100 or more items, the cost is $7 per item. Write a program that asks the user how many items they are buying and prints the total cost.

In [8]:
```
item = eval(input("How many items you are buying"))
dolar = 84.43
if item < 10:
    print("A store charges 12$ per item")
    total_cost = round(dolar*item,2)
    print(f"The total cost is:- {total_cost}")
elif item > 10 and item < 99:
    print("A store charges 10$ per item")
    total_cost = round(dolar*item,2)
    print(f"The total cost is:- {total_cost}")
elif item >= 100:
    print("A store charges 7$ per item")
    total_cost = round(dolar*item,2)
    print(f"The total cost is:- {total_cost}")
```

```
else:
    print("Buy any thing")
```

```
A store charges 10$ per item
The total cost is:- 3799.35
```

In [ ]:
```
Que 7:- Write a program that asks the user for two numbers and prints Close if t
numbers are within .001of each other and Not close otherwise.
```

In [9]:
```
n1 = eval(input("Enter number 1"))
n2 = eval(input("Enter number 2"))
if n1 and n2 == .001:
     print("Close")
else:
    print("Not close")
```

```
Not close
```

In [ ]:
```
Que 8:- A year is a leap year if it is divisible by 4, except that years divisib
they are also divisible by 400. Write a program that asks the user for a year an
it is a leap year or not.
```

In [14]:
```
year = int(input("Enter a year"))
if year%4==0 and year%400==0 or year%100 !=0:
    print("Leap year")
else:
    print("Not a leap year")
```

```
Leap year
```

In [ ]:
```
Que 10:- Write a program that asks the user for an hour between 1 and 12, asks t
enter am or pm, and asks them how many hours into the future they want to go.
Print out what the hour will be that many hours into the future, printing am or
appropriate. An example is shown below.

Enter hour: 8
am (1) or pm (2)? 1
How many hours ahead? 5
New hour: 1 pm
```

In [25]:
```
hour = eval(input("plz enter hour between 1 and 12:- "))
xyz = eval(input("plz select 'am' (1) or 'pm'(2)?:- "))
abc = eval(input("How many hours into the future you want to go:- "))
new_hour = (hour + abc)
if new_hour >12:
    new_hour = new_hour-12

if xyz ==1:
    print(new_hour,"am")
else:
    print(new_hour,"pm")
```

```
12 am
```

In [ ]: