Python Programming - 2301CS404

Lab - 2

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01) WAP to check whether the given number is positive or negative.

In [2]:
```
num = int(input("Enter number: "))
if(num>0):
    print("Number is Positive")
else:
    print("Number is Negative")
```

```
Enter number: -6
Number is Negative
```

02) WAP to check whether the given number is odd or even.

In [8]:
```
num = int(input("Enter number :"))
if(num%2==0):
    print("Number is Even")
else:
    print("Number is Odd")
```

```
Enter number :6
Number is Even
```

03) WAP to find out largest number from given two numbers using simple if and ternary operator.

In [10]:
```
n1 = int(input("Enter num 1:"))
n2 = int(input("Enter num 2:"))
ans = (print("Number 1 is largest")) if (n1>n2) else (print("Number 2 is Largest
```

```
Enter num 1:10
Enter num 2:2
Number 1 is largest
```

04) WAP to find out largest number from given three numbers.

In [12]:
```
num1 = int(input("Enter num1: "))
num2 = int(input("Enter num2: "))
num3 = int(input("Enter num3: "))
if(num1>num2):
    if(num1>num3):
        print("Number ",num1," is largest")
    else:
        print("Number ",num3," is largest")
else:
    if(num2>num3):
        print("Number ",num2," is largest")
    else:
        print("Number ",num3," is largest")
```

```
Enter num1: 5
Enter num2: 6
Enter num3: 7
Number  7  is largest
```

05) WAP to check whether the given year is leap year or not.

[If a year can be divisible by 4 but not divisible by 100 then it is leap year but if it is divisible by 400 then it is leap year]

In [17]:
```
year = int(input("Enter year:"))
if((year%400==0) or (year%100!=0) and (year%4==0)):
    print(year,"is Leap year")
else:
    print(year,"is Not leap year")
```

```
Enter year:1900
1900 is Not leap year
```

06) WAP in python to display the name of the day according to the number given by the user.

In [19]:
```
num = int(input("Enter day num:"))
if(num==1):
    print("Sunday")
elif(num==2):
    print("Monday")
elif(num==3):
    print("Teuseday")
elif(num==4):
    print("Wednesday")
```

```
elif(num==5):
    print("Thursday")
elif(num==6):
    print("Friday")
elif(num==7):
    print("Saturday")
```

```
Enter day num:5
Thursday
```

07) WAP to implement simple calculator which performs (add,sub,mul,div) of two no. based on user input.

In [20]:
```
num = int(input("Enter num for condition"))
num1 = int(input("Enter num1: "))
num2 = int(input("Enter num2: "))
match(num):
    case 1:
        print(num1+num2)
    case 2:
        print(num1-num2)
    case 3:
        print(num1*num2)
    case 4:
        print(num1/num2)
```

```
Enter num for condition1
Enter num1: 2
Enter num2: 3
5
```

08) WAP to read marks of five subjects. Calculate percentage and print class accordingly.

Fail below 35 Pass Class between 35 to 45 Second Class between 45 to 60 First Class between 60 to 70 Distinction if more than 70

In [21]:
```
mark = int(input("Enter marks"))
if(mark<35):
    print("Fail")
elif(mark>35 and mark<45):
    print("Pass")
elif(mark>45 and mark<60):
    print("Second")
elif(mark>60 and mark<70):
    print("First")
else:
    print("Distinction")
```

```
Enter marks50
Second
```

09) Three sides of a triangle are entered through the keyboard, WAP to check whether the triangle is isosceles, equilateral, scalene or right-angled triangle.

In [3]:
```
a = float(input("Enter the length of the first side: "))
b = float(input("Enter the length of the second side: "))
c = float(input("Enter the length of the third side: "))

if a + b > c and a + c > b and b + c > a:
    if a == b == c:
        print("The triangle is equilateral.")
    elif a == b or b == c or a == c:
        print("The triangle is isosceles.")
    elif round(a**2, 5) == round(b**2 + c**2, 5) or round(b**2, 5) == round(a**2
        print("The triangle is right-angled.")
    else:
        print("The triangle is scalene.")
else:
    print("The given sides do not form a valid triangle.")
```

```
The given sides do not form a valid triangle.
```

10) WAP to find the second largest number among three user input numbers.

In [29]:
```
num1 = int(input("Enter number1 :"))
num2 = int(input("Enter number2 :"))
num3 = int(input("Enter number3 :"))
if((num1>num2 and num1<num3) or (num1<num2 and num1>num3)):
    print(num1,"is second largest")
elif((num2>num1 and num2<num3) or (num2<num1 and num2>num3)):
    print(num2,"is second largest")
elif((num3>num1 and num3<num2) or (num3<num1 and num3>num2)):
    print(num3,"is second largest")
else:
     print("Not Find")
```

```
Enter number1 :3
Enter number2 :2
Enter number3 :1
2 is second largest
```

11) WAP to calculate electricity bill based on following criteria. Which takes the unit from the user.

a. First 1 to 50 units – Rs. 2.60/unit b. Next 50 to 100 units – Rs. 3.25/unit c. Next 100 to 200 units – Rs. 5.26/unit d. above 200 units – Rs. 8.45/unit

In [6]:
```
units = float(input("Enter the number of units consumed: "))
bill = 0

if units <= 50:
    bill = units * 2.60
elif units <= 100:
    bill = (50 * 2.60) + ((units - 50) * 3.25)
elif units <= 200:
    bill = (50 * 2.60) + (50 * 3.25) + ((units - 100) * 5.26)
else:
    bill = (50 * 2.60) + (50 * 3.25) + (100 * 5.26) + ((units - 200) * 8.45)

print("Total electricity bill: Rs. ",bill)
```

```
Total electricity bill: Rs.  760.64
```