In [ ]:
```
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```

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Python Programming - 2101CS405

Lab - 2

if..else..

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

In [ ]:
```
a=int(input('Enter number : '))
if a>0:
    print('a is positive')
else:
    print('a is negative')
```

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

In [ ]:
```
a = int(input("Enter num : "))
if a%2==0:
    print('a is even')
else:
    print('a is odd')
```

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

In [ ]:
```
a = int(input('Enter a : '))
b = int(input('Enter b : '))
max = a if a>b else b
print(max, 'is largest number')
```

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

In [ ]:
```
a = int(input('Enter a : '))
b = int(input('Enter b : '))
c = int(input('Enter c : '))

if a>b:
    if a>c:
        print('a is largest')
    else:
        print('c is largest')
else:
    if b>c:
        print('b is largest')
    else:
        print('c 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 [ ]:
```
year = int(input('Enter year : '))

if year%4==0 and year%100!=0:
    print('given year is leap year')
elif year%400==0:
    print('given year is leap year')
else:
    print('given year is non leap year')
```

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

In [ ]:
```
 day = int(input('enter day between 1 to 7 : '))

if day == 1:
    print('Sunday')
elif day == 2:
    print('Monday')
elif day == 3:
    print('Tuesday')
elif day == 4:
    print('Wednesday')
elif day == 5:
    print('Thursday')
elif day == 6:
    print('Friday')
elif day ==7:
    print('Saturday')
else:
    print('Enter valid day number')
```

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

In [ ]:
```
a = float(input('Enter first no : '))
b = float(input('Enter second no :' ))

print('1 : Addition \n2 : Subtraction \n3 : Multiplication \n4 : Division')
ch = int(input('Enter choice : '))

if ch == 1:
    print('Add = ',a+b)
elif ch == 2:
    print('sub = ',a-b)
elif ch == 3:
    print('mul = ',a*b)
elif ch == 4:
    print('div = ',a/b)
else:
    print('Enter valid choice')
```

08) 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 [ ]:
```
 unit = float(input('Enter units : '))
bill = 0

if unit < 50:
    bill = unit * 2.60
    print('bill = ',bill)
elif unit > 50 and unit <= 100:
    bill = ((unit - 50 ) * 3.25 )+(50 * 2.60)
    print('bill = ',bill)
elif unit > 100 and unit <= 200:
    bill = ((unit -100) * 5.26) + (50 * 2.60) + (50 * 3.25)
    print('bill = ',bill)
else:
    bill = ((unit - 200) * 8.45) + (100 * 5.26) + (50 * 3.25) + (50 * 2.60)
    print('bill = ',bill)
```

01) 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 [ ]:
```
s1 = float(input('Mark of subject 1 :'))
s2 = float(input('Mark of subject 2 :'))
s3 = float(input('Mark of subject 3 :'))
s4 = float(input('Mark of subject 4 :'))
s5 = float(input('Mark of subject 5 :'))

p = (s1+s2+s3+s4+s5)/5
print('Percentage = ',p,'%')

if p < 35 :
    print('fail')
elif p >= 35 and p < 45:
    print('Pass')
elif p >= 45 and p < 60:
    print('Second class')
elif p >= 60 and p < 70:
    print('First class')
else :
    print('distinction')
```

02) WAP to find out the Maximum and Minimum number from given 4 numbers.

In [ ]:
```
n1 = int(input('Enter n1 : '))
n2 = int(input('Enter n2 : '))
n3 = int(input('Enter n3 : '))
n4 = int(input('Enter n4 : '))

if n1 > n2 and n1 > n3 and n1 > n4:
    print('n1 is largest')
elif n2 > n3 and n2 > n4:
    print('n2 is largest')
elif n3 > n4:
    print('n3 is largest')
else:
    print('n4 is lagest')

if n1 < n2 and n1 < n3 and n1 < n4:
    print('n1 is smallest')
elif n2 < n3 and n2 < n4:
    print('n2 is smallest')
elif n3 < n4:
    print('n3 is smallest')
else:
    print('n4 is smallest')
```

03) WAP to input an integer number and check the last digit of number is even or odd.

In [ ]:
```
num = int(input('Enter the number : '))

rem = num % 10

if rem % 2 == 0:
    print('Last digit is even')
else:
    print('Last digit is odd')
```

04) WAP to determine the roots of the equation ax2+bx+c=0.

In [10]:
```
a = float(input('Enter a : '))
b = float(input('Enter b : '))
c = float(input('Enter c : '))

d = (b*b) - (4 * a * c)
D = d ** 0.5
Z = (-d) ** 0.5

if d > 0:
    x1 = (-b + D) / (2 * a)
    x2 = (-b - D) / (2 * a)
    print('x1 = ',x1)
    print('x2 = ',x2)

if d == 0:
    x1 = x2 = (-b) / (2 * a)
    print('x1 = x2 = ',x1)

if d < 0:
    e = (-b) / (2 * a)
    f = Z / (2 * a)
    print('x1 = ',e,' + i',f)
    print('x2 = ',e,' - i',f)
```

```
Enter a : 2.3
Enter b : 4
Enter c : 5.6
x1 =  -0.8695652173913044  + i 1.2956229935435948
x2 =  -0.8695652173913044  - i 1.2956229935435948
```

In [ ]:

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