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Python Programming - 2101CS405

Lab - 2

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if..else..

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

```
In [5]: n = int(input("Enter Number:"))
        if(n>0):
            print("Positive")
        else:
            print("negative")
```

Enter Number:-29
negative

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

```
In [7]: n = int(input("Enter Number:"))
        if(n%2==0):
            print("Even")
        else:
            print("Odd")
```

Enter Number:13
Odd

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

```
In [ ]: num1 = int(input("Enter Number:"))
num2 = int(input("Enter Number:"))
if(num1>num2):
    print(f"Number 1 is Large:{num1}")
else:
    print(f"Number 2 is Large:{num2}")
```

```
In [1]: num1 = int(input("Enter Number:"))
num2 = int(input("Enter Number:"))

print(f"Number 1 is Large:{num1}") if num1>num2 else print(f"Number 2 is La
```

Enter Number:20
Enter Number:10
Number 1 is Large

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

```
In [4]: num1 = int(input("Enter 1st Number:"))
num2 = int(input("Enter 2nd Number:"))
num3 = int(input("Enter 3rd Number:"))

if(num1>=num2):
    if(num1>=num3):
        print(f"Number 1 is Large:{num1}")
    else:
        print(f"Number 3 is Large:{num3}")
else:
    if(num2>=num3):
        print(f"Number 2 is Large:{num2}")
    else:
        print(f"Number 3 is Large:{num3}")
```

Enter 1st Number:30
Enter 2nd Number:10
Enter 3rd Number:20
Number 1 is Large:30

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 [11]: year = int(input("Enter Year:"))

if(year%4==0):
    if(year%100==0):
        if(year%400==0):
            print(f"Year is Leap Year:{year}")
        else:
            print(f"Year is Not Leap Year:{year}")
    else:
        print(f"Year is Leap Year:{year}")
else:
    print(f"Year is not Leap Year:{year}")
```

Enter Year:2022

Year is not Leap Year:2022

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

```
In [13]: day = int(input("Enter 1-7 Number:"))

if(day==1):
    print(f"{day}:Monday")
elif(day==2):
    print(f"{day}:Tuesday")
elif(day==3):
    print(f"{day}:Wednesday")
elif(day==4):
    print(f"{day}:Thursday")
elif(day==5):
    print(f"{day}:Friday")
elif(day==6):
    print(f"{day}:saturday")
elif(day==7):
    print(f"{day}:Sunday")
else:
    print("Enter Proper Day")
```

Enter 1-7 Number:5

5:Friday

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

```
In [14]: num1 = int(input("Enter 1st Number:"))
num2 = int(input("Enter 2nd Number:"))

choice = int(input("Enter Choice 1.Add 2.sub 3.Mul 4.Div"))

if(choice==1):
    print(f"Add:{num1+num2}")
elif(choice==2):
    print(f"Sub:{num1-num2}")
elif(choice==3):
    print(f"Mul:{num1*num2}")
elif(choice==4):
    print(f"Div:{num1/num2}")
else:
    print("Enter Proper Number")
```

```
Enter 1st Number:20
Enter 2nd Number:30
Enter Choice 1.Add 2.sub 3.Mul 4.Div2
Sub:-10
```

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 [20]: unit = int(input("Enter Electric Unit:"))

if(unit>1 and unit<50):
    ans = unit * 2.60
elif(unit<100):
    ans = 130 + ((unit - 50) * 3.25)
elif(unit<=200):
    ans = 292.5 + ((unit - 100) * 5.26)
else:
    ans = 818.5 + ((unit - 200) * 8.45)

print(f"Ans:{ans}")
```

```
Enter Electric Unit:234
Ans:1105.8
```

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 [17]: physics = int(input("Enter Pysics Mark:"))
math = int(input("Enter Math Mark:"))
ds = int(input("Enter Ds Mark:"))
python = int(input("Enter python Mark:"))
java = int(input("Enter java Mark:"))

pre = ((physics + math + ds + python + java) / 500)*100

if(pre>70):
    print(f"Distinction:{pre}")
elif(pre>60 and pre<70):
    print(f"First Calss:{pre}")
elif(pre>45 and pre<60):
    print(f"Second Calss:{pre}")
elif(pre>35 and pre<45):
    print(f"PASS Calss:{pre}")
else:
    print(f"Fail:{pre}")
```

Enter Pysics Mark:20

Enter Math Mark:54

Enter Ds Mark:64

Enter python Mark:58

Enter java Mark:88

Second Calss:56.8

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

```
In [27]: num1 = int(input("Enter 1st Number:"))
num2 = int(input("Enter 2nd Number:"))
num3 = int(input("Enter 3rd Number:"))
num4 = int(input("Enter 4th Number:"))

if(num1>num2):
    if(num1>num3):
        if(num1>num4):
            print(f"Large:{num1}")
        else:
            print(f"Large:{num4}")
    else:
        if(num3>num4):
            print(f"Large:{num3}")
        else:
            print(f"Large:{num4}")
elif(num2>num3):
    if(num2>num4):
        print(f"Large:{num2}")
    else:
        print(f"Large:{num4}")
elif(num3>num4):
    print(f"Large:{num3}")
else:
    print(f"Large:{num4}")

if(num1<num2):
    if(num1<num3):
        if(num1<num4):
            print(f"Small:{num1}")
        else:
            print(f"Small:{num4}")
    else:
        if(num3<num4):
            print(f"Small:{num3}")
        else:
            print(f"Small:{num4}")
elif(num2<num3):
    if(num2<num4):
        print(f"Small:{num2}")
    else:
        print(f"Small:{num4}")
elif(num3<num4):
    print(f"Small:{num3}")
else:
    print(f"Small:{num4}")
```

```
Enter 1st Number:10
Enter 2nd Number:5454
Enter 3rd Number:5974
Enter 4th Number:9998
Large:9998
Small:10
```

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

```
In [19]: number = int(input("Enter Number:"))
lastdigit = number % 10;

if(lastdigit%2==0):
    print("Even Last Digit")
else:
    print("Odd Last Digit")
```

Enter Number:033
Odd Last Digit

04) WAP to determine the roots of the equation $ax^2+bx+c=0$.

```
In [2]: import math

a = int(input("Enter a: "))
b = int(input("Enter b: "))
c = int(input("Enter c: "))

abc = b*b - 4*a*c;

if(abc<0):
    abc = -abc;
    print("X1: ", -b/(2*a) , " + ", (abc**0.5)/(2*a), "i")
    print("X2: ", -b/(2*a) , " - ", (abc**0.5)/(2*a), "i")
else:
    x1 = (-b + (abc**0.5)) / (2*a)
    x2 = (-b - (abc**0.5)) / (2*a)
    print("X1: ", x1);
    print("X2: ", x2);
```

Enter a: 2
Enter b: 5
Enter c: 4
X1: -1.25 + 0.6614378277661477 i
X2: -1.25 - 0.6614378277661477 i

In []: