Python Programming - 2101CS405

Lab - 2

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Batch: 5

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if..else..

Get Input From User

```python
In [14]: number = int(input("Enter number: "));
```

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

```python
In [15]: if(number<0):
             print("Number is Negitive");
         elif(number==0):
             print("ZERO");
         else:
             print("Number is Positive");
```

```
Number is Positive
```

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

```
In [16]: if(number%2 == 0):
             print("Number is even");
         else:
             print("Number is odd");

Number is even
```

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

```
In [18]: a = int(input("Enter a: "));
         b = int(input("Enter b: "));

         print("\nSIMPLE IF");
         if(a>b):
             print("A is largest ", a);
         else:
             print("B is largest ", b);

         print("\nTERNARY");
         print("A is largest ", a) if a>b else print("B is largest ",b);

SIMPLE IF
B is largest  5

TERNARY
B is largest  5
```

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

```
In [21]: a = int(input("Enter a: "));
         b = int(input("Enter b: "));
         c = int(input("Enter c: "));

         print("A is largest ", a) if a>c else print("C is largest ", c) if a>b else prin

B is largest  4
```

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 [32]: year = int(input("Enter year: "))

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

```
2004 is leap year
```

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

```python
In [35]: day = int(input("Enter day number: "))

match day:
    case 1:
        print("Sunday")
    case 2:
        print("Monday")
    case 3:
        print("Tuesday")
    case 4:
        print("Wednesday")
    case 5:
        print("Thursday")
    case 6:
        print("Friday")
    case 7:
        print("Saturday")
    case default:
        print("INVALID")
```

```
Friday
```

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

```python
In [45]: a = int(input("Enter a: "))
b = int(input("Enter b: "))
ans = 0

print("Enter +", "Enter -", "Enter *", "Enter /", sep="\n")
condition = input()

match condition:
    case '+':
        ans = a + b
    case '-':
        ans = a - b
    case '*':
        ans = a * b
    case '/':
        if(b == 0):
            print("Can't divided by 0")
        else:
            ans = a / b
    case default:
        print("Invalid Input")

print("Answer is: ", ans);
```

```
Enter +
Enter -
Enter *
Enter /
Answer is:  7
```

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 [48]:  unit = int(input("Enter units: "));
          bill = 0

          if(unit<=50):
              bill = unit*2.60
          elif(unit>50 and unit<=100):
              bill = (50*2.60) + (unit-50)*3.25
          elif(unit>100 and unit<=200):
              bill = (50*2.60) + (50*3.25) + (unit-100)*5.260
          else:
              bill = (50*2.60) + (50*3.25) + (100*5.26) + (unit-200)*8.45

          print("Bill is: ", bill);
```

```
Bill is:  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 [53]:  sub1 = int(input("Enter marks of sub1: "))
          sub2 = int(input("Enter marks of sub2: "))
          sub3 = int(input("Enter marks of sub3: "))
          sub4 = int(input("Enter marks of sub4: "))
          sub5 = int(input("Enter marks of sub5: "))

          persentage = (sub1+sub2+sub3+sub4+sub5)/5

          if(persentage < 35):
              print("Fail", persentage)
          elif(persentage>=35 and persentage<45):
              print("Pass Class", persentage)
          elif(persentage>=45 and persentage<60):
              print("Second Class", persentage);
          elif(persentage>=60 and persentage<70):
              print("First Class", persentage);
          else:
              print("Distinction",persentage);
```

```
Fail 16.8
```

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

```
In [57]:  a = int(input("Enter a: "))
          b = int(input("Enter b: "))
          c = int(input("Enter c: "))
          d = int(input("Enter d: "))

          print("\nMax:",max(a, b ,c, d));
          print("Min:",min(a, b, c, d));
```

```
Max: 42
Min: 3
```

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

```
In [62]:  number = int(input("Enter number: "));

          if((number%10)%2 == 0):
              print("Last digit is Even");
          else:
              print("Last digit is Odd");
```

```
Last digit is Even
```

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

```
In [76]:  import math

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

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

          if(temp<0):
              temp = -temp;
              underRootD = math.sqrt(temp);
              print("X1: ", -b/(2*a) ," + ", underRootD/(2*a),"i")
              print("X2: ", -b/(2*a) ," - ", underRootD/(2*a),"i")
          else:
              underRootD = math.sqrt(temp);
              x1 = (-b + underRootD) / (2*a)
              x2 = (-b - underRootD) / (2*a)
              print("X1: ", x1);
              print("X2: ", x2);
```

```
X1:  -0.75  +  1.5612494995995996 i
X2:  -0.75  -  1.5612494995995996 i
```

```
In [ ]:
```