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Python Programming - 2101CS405

Lab - 2

if..else..

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

In [1]:
```
n = int(input("Enter A Number : "))

if n > 0:
    print(f"{n} Is Positive")
else:
    print(f"{n} Is Negative")
```

```
Enter A Number : 6
6 Is Positive
```

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

In [1]:
```
n = int(input("Enter A Number : "))

if n % 2 == 0:
    print(f"{n} Is Even")
else:
    print(f"{n} Is Odd")
```

```
Enter A Number : 5
5 Is Odd
```

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

In [4]:
```
a = int(input("Enter A Number : "))
b = int(input("Enter Second Number : "))

if a > b:
    print(f"Simple If : {a} Is Larger")
else:
    print(f"Simple If : {b} Is Larger")

print(f"Ternary : {a} Is Larger" if a > b else f"Ternary : {b} Is L
```

```
Enter A Number : 346
Enter Second Number : 444
Simple If : 444 Is Larger
Ternary : 444 Is Larger
```

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

In [9]:
```
a = int(input("Enter A Number : "))
b = int(input("Enter A Number : "))
c = int(input("Enter A Number : "))

print(a if a > b and a > c else b if b > c else c, "is largest")
```

```
Enter A Number : 23
Enter A Number : 67
Enter A Number : 54
67 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 [10]:
```
y = int(input("Enter A Year : "))

if y % 4 == 0:
    if y % 100 != 0:
        print(f"{y} Is Leap Year")
else:
    print(f"{y} Is Not Leap Year")
```

```
Enter A Year : 2004
2004 Is Leap Year
```

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

In [15]:
```
n = int(input("Enter A Number : "))

if n == 1:
    print("Sunday")
if n == 2:
    print("Monday")
if n == 3:
    print("Tuesday")
if n == 4:
    print("Wednesday")
if n == 5:
    print("Thursday")
if n == 6:
    print("Friday")
if n == 7:
    print("Saturday")
```

```
Enter A Number : 3
Tuesday
```

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

In [16]:
```
n1 = int(input("Enter First Number : "))
n2 = int(input("Enter Second Number : "))
sign = input("Enter Operation : ")

if sign == '+':
    print(f"The Sum Of {n1} and {n2} is ", n1 + n2)

elif sign == '-':
    print(f"The Subtraction Of {n1} and {n2} is ", n1 - n2)

elif sign == '*':
    print(f"The Multiplication Of {n1} and {n2} is ", n1 * n2)

elif sign == '/':
    print(f"The Division Of {n1} and {n2} is ", n1 / n2)
```

```
Enter First Number : 4
Enter Second Number : 2
Enter Operation : /
The Division Of 4 and 2 is  2.0
```

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 [3]:
```
u = int(input("Enter Units : "))

if u >= 1 and u <= 50:
    print(f"For {u} Units Bill Is ", (u*2.60))
elif u <= 100:
    print(f"For {u} Units Bill Is ", (130+(u-50)*3.25))
elif u <= 200:
    print(f"For {u} Units Bill Is ", (292.5+(u-100)*5.26))
elif u > 200:
    print(f"For {u} Units Bill Is ", (818.5+(u-200)*8.45))
```

```
Enter Units : 400
For 400 Units Bill Is  2508.5
```

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 [2]:
```
m1 = int(input("Enter DS Marks : "))
m2 = int(input("Enter DM Marks : "))
m3 = int(input("Enter WT Marks : "))
m4 = int(input("Enter DBMS Marks : "))
m5 = int(input("Enter DF Marks : "))

percentage = (m1+m2+m3+m4+m5)/5

if percentage < 35:
    print("Fail")
if percentage > 45 and percentage < 35:
    print("Pass Class")
if percentage > 60 and percentage < 45:
    print("Second Class")
if percentage > 70 and percentage < 60:
    print("First Class")
if percentage > 70:
    print("Distinction")
```

```
Enter DS Marks : 67
Enter DM Marks : 93
Enter WT Marks : 87
Enter DBMS Marks : 78
Enter DF Marks : 89
Distinction
```

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

In [7]:
```
n1 = int(input("Enter 1st Number : "))
n2 = int(input("Enter 2nd Number : "))
n3 = int(input("Enter 3rd Number : "))
n4 = int(input("Enter 4th Number : "))

print(n1 if n1 > n2 and n1 > n3 and n1 > n4 else n2 if n2 >
      n3 and n3 > n4 else n3 if n3 > n4 else n4, "is largest")

print(n1 if n1 < n2 and n1 < n3 and n1 < n4 else n2 if n2 <
      n3 and n3 < n4 else n3 if n3 < n4 else n4, "is smallest")
```

```
Enter 1st Number : 3
Enter 2nd Number : 4
Enter 3rd Number : 6
Enter 4th Number : 9
9 is largest
3 is smallest
```

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

In [11]:
```
n = int(input("Enter A Number : "))

num = n % 10

if num % 2 == 0:
    print(f"{num} Is Last Digit And It Is Even")
else:
    print(f"{num} Is Last Digit And It Is Odd")
```

```
Enter A Number : 524
4 Is Last Digit And It Is Even
```

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

In [19]:
```
import math

a = float(input("Enter Value Of a : "))
b = float(input("Enter Value Of b : "))
c = float(input("Enter Value Of c : "))

d = (b*b-4*a*c)

val = math.sqrt(abs(d))

if d > 0:
    print("Real Roots")
    print(-b+val)/(2*a)
    print(-b-val)/(2*a)
elif d == 0:
    print("Real & Same Roots : ", (-b)/(2*a))
elif d < 0:
    print("Complex Roots")
    print(-b/(2*a), "+i", val)
    print(-b/(2*a), "-j", val)
```

```
Enter Value Of a : 1
Enter Value Of b : 1
Enter Value Of c : 1
Complex Roots
-0.5 +i 1.7320508075688772
-0.5 -j 1.7320508075688772
```

In [ ]: