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Lab - 3

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

In [8]:
```
n = int(input("Enter a Number - "))

if n>0:
    print(f"{n} is positive.")
else:
    print(f"{n} is negative")
```

```
Enter a Number - 12
12 is positive.
```

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

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

if n&1:
    print(f"{n} is odd.")
else:
    print(f"{n} is even")
```

```
Enter a Number - 67
67 is odd.
```

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

In [14]:
```
a = int(input("Enter a Number a - "))
b = int(input("Enter a Number b - "))

if a>b:
    res1 = a
else:
    res1 = b

print(f"Largest Number is {res1}")

res2 = a if a>b else b

print(f"Largest Number is {res2}")
```

```
Enter a Number a - 12
Enter a Number b - 1
Largest Number is 12
Largest Number is 12
```

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

In [18]:
```
a = int(input("Enter a Number a - "))
b = int(input("Enter a Number b - "))
c = int(input("Enter a Number c - "))

if a>b and a>c:
    res = a
elif b>c:
    res = b
else:
    res = c

print(f"Largest Number is {res}")
```

```
Enter a Number a - 12
Enter a Number b - 13
Enter a Number c - 15
Largest Number is 15
```

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 [24]:
```
y = int(input("Enter a year - "))

if (y%4 == 0 and y%100 != 0) or y%400 == 0:
    print(f"{y} is a leap year.")
else:
    print(f"{y} is not a leap year.")
```

```
Enter a year - 104
104 is a leap year.
```

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

In [28]:
```
n = int(input("Enter a Number - "))

match n:
    case 1:
        res = "Monday"
    case 2:
        res = "Tuesday"
    case 3:
        res = "Wednesday"
    case 4:
        res = "Thursday"
    case 5:
        res = "Friday"
    case 6:
        res = "Saturday"
    case 7:
        res = "Sunday"
```

```
    case _:
        res = "Invalid Input"

print(f"The day is {res}")
```

```
Enter a Number - 6
The day is Saturday
```

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

In [30]:
```
a = int(input("Enter a Number a - "))
b = int(input("Enter a Number b - "))
c = input("Enter choice - \n(1=>+),(2=>-),(3=>*)(4=>/): ")

match c:
    case '+':
        res = a + b
    case '-':
        res = a - b
    case '*':
        res = a * b
    case '/':
        res = a / b
    case _:
        res = "Invald Input"

print(f"Answer = {res}")
```

```
Enter a Number a - 1
Enter a Number b - 1
Enter choice -
(1=>+),(2=>-),(3=>*)(4=>/): +
Answer = 2
```

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 [43]:
```
m1,m2,m3,m4,m5 = input("Enter marks for subject 1,2,3,4,5 - ").split(',')
m1 = int(m1)
m2 = int(m2)
m3 = int(m3)
m4 = int(m4)
m5 = int(m5)

percent = (m1+m2+m3+m4+m5)/500.0 * 100.0

if percent > 70:
```

```
    res = "Distinction"
elif percent < 71 and percent > 60:
    res = "First Class"
elif percent < 61 and percent > 45:
    res = "Second Class"
elif percent < 46 and percent > 34:
    res = "Pass"
else:
    res = "Fail"

print(f"Result = {res}")
```

```
Enter marks for subject 1,2,3,4,5 - 67,67,67,67,67
Result = First Class
```

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

In [46]:
```
a = int(input("Enter a Number a - "))
b = int(input("Enter a Number b - "))
c = int(input("Enter a Number c - "))

if a>b and a<c:
    res = a
elif b<c:
    res = b
else:
    res = c

print(f"Second Largest Number is {res}")
```

```
Enter a Number a - 1
Enter a Number b - 3
Enter a Number c - 2
Second Largest Number is 2
```

10) 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 [51]:
```
u = int(input("Enter unit - "))
total = 0

if u >=1 and u <= 50:
    total = u*2.60
elif u > 50 and u <= 100:
    total = 50*2.60 + (u-50)*3.25
elif u > 100 and u <= 200:
    total = 50*2.60 + 50*3.25 + (u-100)*5.26
else:
    total = 50*2.60 + 50*3.25 + 100*5.26 + (u-200)*8.45

print(f"Electricity Bill = {total} Rs.")
```

```
Enter unit - 670
Electricity Bill = 4790.0 Rs.
```

In [ ]: