

## Lab 2

August 4, 2023

```
[2]: a = 32
      b = 6
      print('Addition of two numbers:',a+b)
      print('Subtraction of two numbers:',a-b)
      print('Multiplication of two numbers:',a*b)
      print('Division of two numbers:',a/b)
      print('Reminder of two numbers:',a%b)
      print('Exponent of two numbers:',a**b)
      print('Floor division of two numbers:',a//b)
      print('Two numbers are equal or not:',a==b)
      print('Two numbers are not equal or not:',a!=b)
      print('a is less than or equal to b:',a<=b)
      print('a is greater than or equal to b:',a>=b)
      print('a is greater b:',a>b)
      print('a is less than b:',a<b)
```

```
Addition of two numbers: 38
Subtraction of two numbers: 26
Multiplication of two numbers: 192
Division of two numbers: 5.333333333333333
Reminder of two numbers: 2
Exponent of two numbers: 1073741824
Floor division of two numbers: 5
Two numbers are equal or not: False
Two numbers are not equal or not: True
a is less than or equal to b: False
a is greater than or equal to b: True
a is greater b: True
a is less than b: False
```

```
[4]: a = 32
      b = 6
      print('a=b:', a==b)
      print('a+=b:', a+b)
      print('a-=b:', a-b)
      print('a*=b:', a*b)
      print('a%=b:', a%b)
      print('a**=b:', a**b)
```

```
print('a//b:', a//b)
```

```
a=b: False
a+=b: 38
a-=b: 26
a*=b: 192
a%=b: 2
a**=b: 1073741824
a//b: 5
```

```
[5]: a = 5
      b = 6
      print('a&b:', a&b)
      print('a|b:', a|b)
      print('a^b:', a^b)
      print('~a:', ~a)
      print('a<<b:', a<<b)
      print('a>>b:', a>>b)
```

```
a&b: 4
a|b: 7
a^b: 3
~a: -6
a<<b: 320
a>>b: 0
```

```
[7]: a = 5
      print('Is this statement true?:', a > 3 and a < 5)
      print('Any one statement is true?:', a > 3 or a < 5)
      print('Each statement is true then return False and vice-versa:', (not(a > 3 and
      ↪ a < 5)))
```

```
Is this statement true?: False
Any one statement is true?: True
Each statement is true then return False and vice-versa: True
```

```
[8]: x = ["Rose", "Lotus"]
      print(' Is value Present?', "Rose" in x)
      print(' Is value not Present?', "Riya" not in x)
```

```
Is value Present? True
Is value not Present? True
```

```
[9]: a = ["Rose", "Lotus"]
      b = ["Rose", "Lotus"]
      c = a
      print(a is c)
      print(a is not c)
      print(a == b)
```

```
print(a != b)
```

True  
False  
True  
False

```
[11]: num = int(input("enter the number:"))  
  
if num%2 == 0:  
    print("The Given number is an even number")
```

enter the number:4  
The Given number is an even number

```
[12]: age = int (input("Enter your age: "))  
if age>=18:  
    print("You are eligible to vote !!");  
else:  
    print("Sorry! you have to wait !!");
```

Enter your age: 23  
You are eligible to vote !!

```
[13]: marks = int(input("Enter the marks? "))  
if marks > 85 and marks <= 100:  
    print("Congrats ! you scored grade A ...")  
elif marks > 60 and marks <= 85:  
    print("You scored grade B + ...")  
elif marks > 40 and marks <= 60:  
    print("You scored grade B ...")  
elif (marks > 30 and marks <= 40):  
    print("You scored grade C ...")  
else:  
    print("Sorry you are fail ?")
```

Enter the marks? 99  
Congrats ! you scored grade A ...

```
[14]: counter = 0  
while counter < 10: # giving the condition  
    counter = counter + 3  
    print("Python Loops")
```

Python Loops  
Python Loops  
Python Loops  
Python Loops

```
[15]: for string in "Python Loops":
        if string == "o" or string == "p" or string == "t":
            continue
        print('Current Letter:', string)
```

Current Letter: P  
Current Letter: y  
Current Letter: h  
Current Letter: n  
Current Letter:  
Current Letter: L  
Current Letter: s

```
[16]: for string in "Python Loops":
        if string == "o" or string == "p" or string == "t":
            break
        print('Current Letter:', string)
```

Current Letter: P  
Current Letter: y

```
[18]: for string in "Python Loops":
        pass
    print( 'Last Letter:', string)
```

Last Letter: s

```
[19]: num = int(input("enter a number: "))
    flag = False
    if num > 1:
        for i in range(2, num):
            if (num % i) == 0:
                flag = True
                break
    if flag:
        print(num, "is not a prime number")
    else:
        print(num, "is a prime number")
```

enter a number: 4  
4 is not a prime number

```
[20]: num = int(input("Enter a number: "))
    temp = num
    reverse = 0
    while temp > 0:
        remainder = temp % 10
        reverse = (reverse * 10) + remainder
        temp = temp // 10
```

```

if num == reverse:
    print('Palindrome')
else:
    print("Not Palindrome")

```

Enter a number: 123

Not Palindrome

```

[21]: num = int(input("Enter a number: "))
factorial = 1
if num < 0:
    print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
    print("The factorial of 0 is 1")
else:
    for i in range(1,num + 1):
        factorial = factorial*i
    print("The factorial of",num,"is",factorial)

```

Enter a number: 3

The factorial of 3 is 6

```

[23]: n = 5
for i in range(0, n):
    for j in range(0, i+1):
        print("* ",end="")
    print("\n")

```

```

*
* *
* * *
* * * *
* * * * *

```

```

[25]: n = 5
k = n - 1
for i in range(0, n):
    for j in range(0, k):
        print(end=" ")
    k = k - 1
    for j in range(0, i+1):
        print("* ", end="")
    print("\n")

```

```

*
* *
* * *
* * * *
* * * * *

```

```
[26]: n = 5
num = 1
for i in range(0, n):
    num = 1
    for j in range(0, i+1):
        print(num, end=" ")
        num = num + 1
    print("\r")
```

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

```
[27]: n = 5
num = 65
for i in range(0, n):
    for j in range(0, i+1):
        ch = chr(num)
        print(ch, end=" ")
        num = num + 1
    print()
```

```
A
B C
D E F
G H I J
K L M N O
```

```
[ ]:
```