LAB 1A ¶

1a.To elobrate variables and data types int,float ,Boolean,string,list,set,dict, tuple, exchange of variables

In [1]:
```
a=1.0
b=4.0
d=True
c="python for ds"
e=[4,10,"kerthi","harry"]
f={4,1,2,5,7,8}
g={4,3.0,"python","dynamic"}
h={"a":4.0,"python":"language"}
print("value of a=",a)
print("type of a=",type(a))
print("value of b=",b)
print("type of b=",type(b))
print("value of d=",d)
print("type of d=",type(d))
print("value of c=",c)
print("type of c=",type(c))
print("value of e=",e)
print("type of e=",type(e))
print("value of f=",f)
print("type of f=",type(f))
print("value of g=",g)
print("value of a=",a)
print("type of a=",type(a))
print("value of b=",b)
print("type of b=",type(b))
print("value of d=",d)
print("type of d=",type(d))
print("value of c=",c)
print("type of c=",type(c))
print("value of e=",e)
print("type of e=",type(e))
print("value of f=",f)
print("type of f=",type(f))
print("value of g=",g)
print("type of g=",type(g))
print("value of h=",h)
print("type of g=",type(h))
```

```
value of a= 1.0
type of a= <class 'float'>
value of b= 4.0
type of b= <class 'float'>
value of d= True
type of d= <class 'bool'>
value of c= python for ds
type of c= <class 'str'>
value of e= [4, 10, 'kerthi', 'harry']
type of e= <class 'list'>
value of f= {1, 2, 4, 5, 7, 8}
type of f= <class 'set'>
value of g= {'dynamic', 3.0, 4, 'python'}
value of a= 1.0
type of a= <class 'float'>
value of b= 4.0
type of b= <class 'float'>
value of d= True
type of d= <class 'bool'>
value of c= python for ds
type of c= <class 'str'>
value of e= [4, 10, 'kerthi', 'harry']
type of e= <class 'list'>
value of f= {1, 2, 4, 5, 7, 8}
type of f= <class 'set'>
value of g= {'dynamic', 3.0, 4, 'python'}
type of g= <class 'set'>
value of h= {'a': 4.0, 'python': 'language'}
type of g= <class 'dict'>
```

In [2]:
```
i=int(input("Enter the first number:"))
j=int(input("Enter the second number:"))
print("Before Swapping i=",i,"and j=",j)
i,j=j,i
print("After Swapping i=",i,"and j=",j)
```

```
Enter the first number:10
Enter the second number:45
Before Swapping i= 10 and j= 45
After Swapping i= 45 and j= 10
```

In [4]:
```
k=float(input("Enter the first number:"))
l=float(input("Enter the second number:"))
print("Before Swapping k=",k,"and l=",l)
k,l=l,k
print("After Swapping k=",k,"and l=",l)
```

```
Enter the first number:34.8
Enter the second number:76.9
Before Swapping k= 34.8 and l= 76.9
After Swapping k= 76.9 and l= 34.8
```

In [5]:
```
m=input("Enter the first value:")
n=input("Enter the second value:")
print("Before Swapping m=",m,"and n=",n)
m,n=n,m
print("After Swapping m=",m,"and n=",n)
```

```
Enter the first value:sai
Enter the second value:keerthi
Before Swapping m= sai and n= keerthi
After Swapping m= keerthi and n= sai
```

LAB 1B

2.If elobrate mathematical operations such as addition subtraction multiplication division modulation and power and explore the operator precedence

In [10]:
```
a-int(input("Enter first number:"))
b=int(input("Enter second number:"))
sum=a+b
diff=a-b
prod=a*b
div=a/b
rem=a%b
pow=a**b
flr=a//b
print("Sun of {0} and [1] is: {2}".format(a,b,sum))
print("Difference of {0} and {1} is: {2}".format(a,b,diff))
print("Product of {0} and {1} is : {2}".format(a,b,prod))
print("{0} divided by {1} is: {2}".format(a,b,div))
print("{0} remainder {1} is: {2}".format(a,b,rem))
print("{0} power {1} is : {2}". format(a,b,pow))
print("{0} floor division {1} is : {2}".format(a,b,flr))
```

```
Enter first number:218
Enter second number:78
Sun of 1.0 and [1] is: 79.0
Difference of 1.0 and 78 is: -77.0
Product of 1.0 and 78 is : 78.0
1.0 divided by 78 is: 0.01282051282051282
1.0 remainder 78 is: 1.0
1.0 power 78 is : 1.0
1.0 floor division 78 is : 0.0
```

In [ ]:
```
#explore the operator precedence
```

In [14]:
```
a = 25

b = 15

c = 10

d = 5
e = (a + b) * c / d    #( 40 * 10 ) / 5
print("value of (a + b)* c / d is ",e)
e = ((a + b) * c) / d     # (40 * 10 ) / 5
print("value of ((a + b) c) / d is ",e)
e = (a + b) * (c / d)    # (40) * (10/5)
print("Value of (a + b) (c/ d) is ",e)
e = a + (b * c) / d      # 25+ (150/5)
print("Value of a + (b* c) / d is ",e)
```

```
value of (a + b)* c / d is  80.0
value of ((a + b) c) / d is  80.0
Value of (a + b) (c/ d) is  80.0
Value of a + (b* c) / d is  55.0
```