Name:P.Asha Belcilda
Rollno:225229104
Labsheet-10

Question 1:Write a program to implement MAP function.Find the square root of a list of numbers[1,2,4,6]using map and sqrt
functions.Check the answer against your user defined function mymap().

In [1]:
```
def mymap(n):
    return n**0.5
num=[1,2,4,6]
print("Original List:",num)
result=map(mymap,num)
print("Square root:",list(result))
```

```
Original List: [1, 2, 4, 6]
Square root: [1.0, 1.4142135623730951, 2.0, 2.449489742783178]
```

Question 2:Write a program to implement FILTER function.Filter all upper case letters in a list['x','Y','2','3','Z','b'] using
filter function.Check the answer against your user define function myfilter().

In [2]:
```
fil=['x','Y','2','3','Z','b']
def my_filter(n):
    if n.isupper():
        return n
result=filter(my_filter,fil)
print("Filtered uppercase:",list(result))
```

```
Filtered uppercase: ['Y', 'Z']
```

Question 3:Write a program to create a lambda function that takes two characters and concatenates them.Now,apply this function
inside REDUCE funtion that will reduce the list of characters
['a','b','c','d']with the intial value 'x'.

In [1]:
```
from functools import reduce
re=reduce(lambda x,y:x+y,['a', 'b', 'c', 'd'],'x')
print(re)
```

```
xabcd
```

Question 4:Imagine an accounting routine used in a abook shop.It works on a list with sublists,which look like this:
Write a python program ,which returns a list 2-tuples.Each tuple consists of an order number and the product of the price per
items and the quality.The product should be decreased ny Rs 10if the value of the order is smaller than Rs 100.00.Write a python program using lambda and map functions.

In [2]:
```
orders=[['34587','Learning Python,Mark Lutz',4,40.95],['98762','Programming Pytho
m_order=100
total= list(map(lambda x: x if x[1] >= m_order else (x[0], x[1] - 10),
 map(lambda x: (x[0],x[2] * x[3]), orders)))
print(total)
```

```
[('34587', 163.8), ('98762', 284.0), ('77226', 88.85000000000001), ('88112', 6
4.97)]
```