Python Prac_Aim2
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2. Write a python program to define a tuple of 10 student's information as roll no., name, address and marks of 3 subjects Physics, Chemistry and Mathematics. The list is sorted by roll no. Your program should display list of three toppers in all students.

```
In [4]:  student = [(68,"Gaurav","Nagpur",99,98,97),(62,"Rahul","Nagpur",94,90,95),(63,"Watve","Cha
         ndrapur",86,87,98),(37,"Krish","Butibori",82,81,90),(63,"Vinay","Nagpur",94,95,96),(66,"Pras
         h","Kamptee",96,87,89),(69,"Veer","Amritsar",99,99,97),(56,"Pratham","Jaripatka",76,73,88),(
         50,"Sai","Ghatgobar",80,92,67),(72,"Tejas","khamla",64,82,93)]
         marks=[]
         namelist=[]
         for i in range(10):
             avg = (student[i][3]+student[i][4]+student[i][5])/3
             marks.append(avg)
             name = (student[i][1])
             namelist.append(name)
         print ("Toppers with there percentage are as follows")
         print(sorted(zip(marks,namelist), reverse=True)[:3])

         Toppers with there percentage are as follows
         [(98.33333333333333, 'Veer'), (98.0, 'Gaurav'), (95.0, 'Vinay')]
```

3. Python program that displays which letters present in the two strings but not in both

```
In [14]: s1=input("Enter first string:")
         s2=input("Enter second string:")
         a=list(set(s1)^set(s2)) print("The
         letters are:")
         for i in a:
             print(i)

         Enter first string:Yash Enter
         second string:Zode The
         letters are:
         h
         Z
         o
         e
         a
         s
         d
         Y
```

4.A List rotation consists of taking the first element and moving it to the end. Write a python that takes a list L and a positive integer k and generate the list L after k rotations. If K is not positive, it should return L unchanged.Ip: L= [1,2,3,4,5] After 1st rotation: list become [2,3,4,5,1] After the 2nd rotation list becomes [3,4,5,1,2].....So on Print output after each rotation. Take the value of k from the user.

```
In [9]:  def listrotation(L,k): k=int(input("Enter
             an integer")) if k<0:
                 return L
             A=L
             while(k>0):
                 temp=A[0]
                 for i in range(len(L)-1):
                     A[i]=A[i+1]
                     A[i+1]=temp
                     k=k-1
                 return A k=int(input("Enter an
         integer:")) for i in range(k+1):
             print(listrotation([1,2,3,4,5],i))



         Enter an integer:1
         Enter an integer2 [2,
         3, 4, 5, 1]
         Enter an integer3
         [2, 3, 4, 5, 1]
```

5. Create a list of tuples, with each tuple having 5 numbers. Perform the addition of 3rd numbers of each tuple

```
In [10]: my_tuple=[(1,2,3,4,5), (5,6,7,8,9), (2,4,6,8,0), (3,6,9,2,1), (2,1,7,8,5)]
         a=my_tuple[0][2]
         b=my_tuple[1][2]
         c=my_tuple[2][2]
         d=my_tuple[3][2]
         e=my_tuple[4][2]
         print(a+b+c+d+e)

         32
```

6. Write a python program to Convert a long string to a list and print all the words and their frequencies

```
In [11]: my_string="Hotstar is an Indian brand of subscription video on-demand over-the-top streaming service owned by
         Star India and operated by Disney Media and Entertainment Distribution, bot h a division of The Walt Disney
         Company."
         word_list = my_string.split()
         print(word_list)
```

```
word_freq = [word_list.count(n) for n in word_list]
```

```
['Hotstar', 'is', 'an', 'Indian', 'brand', 'of', 'subscription', 'video', 'on-demand', 'overthe-top', 'streaming', 'service', 'owned', 'by', 'Star', 'India', 'and', 'operated', 'by', 'D isney', 'Media', 'and', 'Entertainment', 'Distribution,', 'both', 'a', 'division', 'of', 'Th e', 'Walt', 'Disney', 'Company.'] [1, 1, 1, 1, 1, 2, 1, 1, 1, 1, 1, 1, 1, 2, 1, 1, 2, 1, 2, 2, 1, 2, 1, 1, 1, 1, 1, 2, 1, 1, 2, 1]
```

```
['Hotstar', 'is', 'an', 'Indian', 'brand', 'of', 'subscription', 'video', 'on-demand', 'over-
the-top', 'streaming', 'service', 'owned', 'by', 'Star', 'India', 'and', 'operated', 'by', 'D
isney', 'Media', 'and', 'Entertainment', 'Distribution,', 'both', 'a', 'division', 'of', 'Th e', 'Walt',
'Disney', 'Company.']
[1, 1, 1, 1, 1, 2, 1, 1, 1, 1, 1, 1, 1, 2, 1, 1, 2, 1, 2, 2, 1, 2, 1, 1, 1, 1, 1, 2, 1, 1, 2,
1]
```

In [ ]: