Assignment 3

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1. Consider a 2D list storing student's name along with their marks. Use list comprehension to create another list comprising names of students with marks greater than 85.

```
def toppers(L):
    return [i for i in L if i[1]>85]
def main():
    L=eval(input("Enter Marks list: "))
    Toppers=toppers(L)
    print("The list of toppers is:",Toppers)
if __name__=="__main__":
    main()
```

```
Enter Marks list: [['Arnav',92],['Mridul',75],['Vaibhav',88],['Rakshit',72]]
The list of toppers is: [['Arnav', 92], ['Vaibhav', 88]]
```

2. WAP that takes a list of marks as an input from the user and creates a dictionary storing marks and the corresponding frequency as key-value pairs.

```
def frequency(L):
    return dict((i,L.count(i)) for i in L)
def main():
    L=eval(input("Enter Marks list: "))
    print("The dictionary:",frequency(L))
if __name__=="__main__":
    main()
```

```
Enter Marks list: [97,99,80,80,97,64,73,75]
The dictionary:  {97: 2, 99: 1, 80: 2, 64: 1, 73: 1, 75: 1}
```

3. WAP that takes a list of names as an input from the user and creates a dictionary storing word-length as key-value pair for each word given in the list.

```
def name(L):
    return dict((i,len(i)) for i in L)
def main():
    L=eval(input("Enter names list: "))
    print("The dictionary:",name(L))
if __name__=="__main__":
    main()
```

```
Enter names list: ['Arnav','Mridul','Vaibhav']
The dictionary: {'Arnav': 5, 'Mridul': 6, 'Vaibhav': 7}
```