WS 7 – Dictionary & Sorting
Attempt the following questions in the class work note book:

1. Define a dictionary. Give an example.
2. Can sequence operations such as slicing and concatenation be applied to dictionaries? Expalin.
3. Why Lists can't be used as keys in dictionary.
4. Why is a dictionary termed as an unordered collection of objects?
5. How is del D and del D[<key>] different from one another if D is a dictionary.
6. Identify and correct the error in the following :
   D1={"a":1,1:"a",[1,"a"]:"two"]
7. Predict the output for the following :

```
d1={5:[6,7,8],"a":(1,2,3)}
print(d1.keys())
print(d1.values())
```

8. Predict the output for the following :

```
mydict={"m":27,"b":43,"p":25,"d":30}
valA=''
for i in mydict:
    if i>valA:
        valA=i
        valB=mydict[i]
print(valA)
print(valB)
print(30 in mydict)
print("b" in mydict)
myLst=list(mydict.items())
myLst.sort(reverse=True)
print(myLst)
print(myLst[-1])
```

9. Predict the output for the following :

```
text="abracadabraaabbccrr"
counts={}
ct=0
lst=[]
for word in text:
    if word not in lst:
        lst.append(word)
        counts[word]=0
```

```
        ct=ct+1
        counts[word]=counts[word]+1
    print(counts)
    print(lst)
```
10. Predict the output:
```
fruit={}
L1=['apple','banana','apple']
for index in L1:
    if index in fruit:
        fruit[index]+=1
    else:
        fruit[index]=1
print(len(fruit))
print(fruit)
a={(1,2):1,(2,3):2}
print(a[2,3])
b={'x':1,'y':2,'z':3}
print(b['x'])
```
11. Create a dictionary whose keys are month names and whose values are the number of days in the corresponding months.
    i. Ask the user to enter a month name and use the dictionary to tell how many days are in the month.
    ii. Print out all of the keys in alphabetical order.
    iii. Print out all the month with 31 days.
12. What is sorting? Name some sorting techniques.
13. Why do number-of-comparisons reduce in every successive iteration in bubble sort.
14. What is the difference bubble sort and insertion sort.
15. Write a python code to sort a list of tuple elements in descending order of points using bubble sort. The tuple-elements of the list contain the following information about different players: (PlayerNo, Playername, Points)