Assignment - 13

1A.

```
import math
d = int(input('Enter the no of elements: '))
lst= list (map(int,input("Enter numbers: ").strip().split(',')))[:d]
q1=[]
c = 50
h = 30
for i in range(0,d):
    q = math.sqrt((2*c*lst[i])/h)
    q1.append(q)
print(q1)
```

2A.

3A.

```
d = int(input('Enter the no of elements: '))
lst= list (map(str,input("Enter numbers: ").strip().split(',')))[:d]
lst.sort()
lst
```

4A.

```
d = int(input('Enter the no of elements: '))
words=list(map(str,input('Enter words sep by space: ').strip().split(' ')))[:d]
words.sort()
words1 = list(set(words))
```

```
words1.sort()
words1tostr=' '.join([str(ele) for ele in words1])
words1tostr
```

5A.

```
sentence = input('Enter a sentence : ')
count1=0
count2=0
for i in sentence:
    if (i.isalpha()):
        count1=count1+1
    elif(i.isnumeric()):
        count2=count2+1
print('LETTERS: ', count1)
print('DIGITS: ', count2)
```

6A.

```
## Check validity of password
pwds = input('Enter the passwords seperated by comma: ')
list1=list(pwds.split(','))
for pwd in list1:
    count=len(pwd)
    count_notlower=0
    count_notupper=0
    count_notnumber=0
    count_notascii=0
```

```
sp1='\$'
sp2='\#'
sp3='\@'
count_sp1=0
count_sp2=0
count_sp3=0
res1=0
res2=0
res3=0
for i in range(0,count):
    if (pwd[i].islower()==False) :
        count_notlower=count_notlower+1
    if (pwd[i].isupper()==False) :
        count_notupper=count_notupper+1
    if (pwd[i].isnumeric()==False) :
        count_notnumber=count_notnumber+1
    if (pwd[i].isascii()==False) :
        count_notascii=count_notascii+1
    res1 = re.findall(sp1,pwd[i])
    res2 = re.findall(sp2,pwd[i])
    res3 = re.findall(sp3,pwd[i])
    if len(res1) == 0:
        count_sp1 = count_sp1+1
    if len(res2) == 0:
```

```
            count_sp2 = count_sp2+1
        if len(res3) == 0:
            count_sp3 = count_sp3+1


#print(count_notlower,count_notnumber,count_notupper,count_sp1,count_sp2,count_sp3)
    if (count_notlower) < count and count_notnumber < count and count_notupper < count
and (count_sp1 < count or count_sp2 < count or count_sp3 < count):
        print(pwd)
#     elif (count_sp1) == count and (count_sp2) == count and (count_sp3) == count:
 #        print('Password not valid',pwd)
```