Assignment

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1st

1.

```
myList = [1, 1, 1, 9, 1, 1, 1, 1, 1, 1, 1]
mySet = set(myList)
print(mySet)
```

2.

```
sum=0
mylist=[1,2,6,78,9]
for i in range(len(mylist)):
        sum=sum+mylist[i]
average=sum/len(mylist)
ref=abs(mylist[0]-average)
for i in range(len(mylist)):
        if ref>abs((mylist[i]-average)):
                ref=abs((mylist[i]-average))
                near=mylist[i]
print(near)
```

3.

```
onboard=[50,76,8,7]
alight=[6,9,0,1]
tot_onboard,tot_alight=0,0
```

```
for i in range(len(onboard)):
        tot_onboard+=onboard[i]
        tot_alight+=alight[i]
people_in_bus=tot_onboard+tot_alight
print(people_in_bus)
```

4.

```
list1 = [1, 2, 4]
list2 = [4, 5, 6]

set_difference = set(list1) - set(list2)
list_difference = list(set_difference)

print(list_difference)
```

5.

```
list1 = [1,2,3,7]
list2 = [2,3]

set1 = set(list1)
set2 = set(list2)

missing = list(sorted(set1 - set2))
print('missing:', missing)
```

6.

```
arr = [1, 4, 3, 19, 18, 25]
n = len(arr)
diff = 10**20
for i in range(n-1):
      for j in range(i+1,n):
         if abs(arr[i]-arr[j]) < diff:
            diff = abs(arr[i] - arr[j])
```

```
print("Minimum difference is " + str(diff))
```

7.

```
sum=0
mylist=[1, 12, 5, 78, 39, 67]
for i in range(len(mylist)):
   sum=sum+mylist[i]
average=sum/len(mylist)     #average=13.66666666
count=0
for i in range(len(mylist)):
   if mylist[i]<average:
      count=count+1
print(count)
```

2nd

1.

```
ti=”5:70:65”
ho=int(ti[0])
min=int(ti[2:4])
sec=int(ti[5:7])
if sec>60:
        sec%=60
        min+=1
if min>60:
        min%=60
        ho+=1
if min<10 and sec>10:
        print(str(ho)+”:0”+str(min)+”:”+str(sec))
```

```
elif min>10 and sec<10:
        print(str(ho)+":"+str(min)+":0"+str(sec))
elif min>10 and sec>10
        print(str(ho)+":"+str(min)+":"+str(sec))
elif min<10 and sec<10
        print(str(ho)+":0"+str(min)+":0"+str(sec))
elif min==0 and sec==00:
        print(str(ho)+":00:00")
elif min==0 and sec>10:
        print(str(ho)+":00:"+str(sec))
elif min==0 and sec<10:
        print(str(ho)+":00:0"+ str(sec))
elif min>10 and sec==0:
        print(str(ho)+":"+str(min)+":00")
elif min<10 and sec==0:
        print(str(ho)+":0"+str(min)+":00")
```

2.

```
date="45/08/2018"
dd=int(date[0:2])
mm=int(date[3:5])
yyyy=int(date[6:10])
if mm==1 or mm==3 or mm==5 or mm==7 or mm==8 or mm==10 or mm==12:
        if dd>31:
                dd=dd%31
                mm=mm+1
        elif mm==2 and yyyy%4==0:
                if dd>28:
                        dd=dd%28
                        mm=mm+1
        elif mm==2 and yyyy%4!=0:
                if dd>29:
                        dd=dd%29
                        mm=mm+1
        else:
```

```
                if dd>30:
                        dd=dd%30
                        mm=mm+1
        print(str(dd)+"/"+str(mm)+"/"+str(yyyy))
```

3.

```
num=123456789
s=[]
for i in range(4):
        s.append(str(num %256))
        num//256
        print(num.join(s[::-1]))
res=0
ip=7.91.205.21
for j,i in enumerate(ip.split(.)[::-1]):
        res+=256**j*int(i)
        print(res)
```

4.

```
word=input("Enter a string")
clean_word = word.lower()
letter_list = []
for letter in clean_word:

    # If letter is an alphabet then only check
    if letter.isalpha():
       if letter in letter_list:
          print("False")
       letter_list.append(letter)

    print("True")
```

5.

```
str="hello"
result=[]
for i in range(len(str)):
    str=str.lower()
    temp_list=list(str)
    if temp_list[i].isalpha():
        temp_list[i]=str[i].upper()
        str=''.join(temp_list)
        result.append(str)
print(result)
```

6.

```
print("Enter the Number :")
num=int(input())
Largest=0;
while (num > 0):
    reminder=num%10
    if Largest<reminder:
        Largest = reminder
    num =int(num / 10)
```

```
print("The Largest Digit is :", Largest)
```

7.

```
num=input(“Enter No.: “)
large=num[0]
for i in range(len(num)):
        if num[i]>large:
        large=num[i]
print(large)
```

8.

```
str ='apple mango apple orange orange apple guava mango mango'
str = str.split()
str2 = []
for i in str:
      if i not in str2:
         str2.append(i)
for i in range(0, len(str2)):
      print('Frequency of', str2[i], 'is :', str.count(str2[i]))
```

9.

```
RGB=(255,0,255)
Hex=[‘0’,’1’,’2’,’3’,’4’,’5’,’6’,’7’,’8’,’9’,’A’,’B’,’C’,’D’,’E’,’F’]
R1=int(RGB[0]/16)
```

```
R2=RGB[1]%16
G1=int(RGB[1]/16)
G2=RGB[1]%16
B1=int(RGB[2]/16)
B2=RGB[2]%16
print("0x"+Hex[R1]+Hex[R2]+Hex[G1]+Hex[G2]+Hex[B1]+Hex[B2])
```

10.

```
num=['1','2','3','4','5','6','7','8','9','10','11','12','13','14','15','16','17','18','19','20','21','22','23','24','25','26']
small=['a','b','c','d','e','f','g','h','i','j','k','l','m','n','o','p','q','r','s','t','u','v','w','x','y','z']
large=['A','B','C','D','E','F','G','H','I','J','K','L','M','N','O','P','Q','R','S','T','U','V','W','X','Y','Z']
str="abde"
for i in str:
    for j in range(len(str)+1):
        if i==small[j]:
            print(large[j]+small[j]*(j))
```