PRACTICAL: 3

A. Define a Python function removedup(l) that takes a nonempty list of integers l and removes all duplicates in l, keeping only the first occurrence of each number. For instance:>>> removedup([3,1,3,5]) =[3, 1, 5].

- **CODE:**

```
n = int(input("Enter length of list: "))
l = []
print("Enter elements of list: ")
for i in range(n):
    item = int(input())
    l.append(item)

def removedup(l):
    n = len(l)
    max1 = max(l)
    a = [0 for i in range(max1+1)]
    i = 0
    while(i<n):
        if(a[l[i]] == 0):
            a[l[i]] = 1

        else:
            del l[i]
            n -= 1
            i -= 1
        i += 1


removedup(l)
print("\nList after removing duplicates:",l)
```

- **OUTPUT:**

```
Enter length of list: 4
Enter elements of list:
3
1
3
5

List after removing duplicates: [3, 1, 5]
```

B. Write a Python function sumofsquare(l) that takes a nonempty list of integers and returns a list [odd,even], where odd is the sum of squares all the odd numbers in l and even is the sum of squares of all the even numbers in l.

- **CODE:**

```
n = int(input("Enter length of list: "))
l = []
print("Enter elements of list:")
for i in range(n):
    item = int(input())
    l.append(item)

def sumofsquare(l):
    ans=[]
    odd=0
    even=0
    for x in l:
        if(x%2==0):
            even = even + x*x

        else:
            odd = odd + x*x

    ans.append(odd)
    ans.append(even)
    return ans

ans = sumofsquare(l)
print("Sum of square of odd numbers: ",ans[0])
```

```
print("Sum of square of even numbers: ",ans[1])
```

- **OUTPUT:**

```
Enter length of list: 4
Enter elements of list:
1
3
2
4
Sum of square of odd numbers:  10
Sum of square of even numbers:  20
```