Do the following Example programs using Jupyter Notebook and submit its pdf onto

Bootcamp Python workshop (google class room)

Program to find the largest number in a list.

```
a=[]
n=int(input("Enter number of elements:"))
for i in range(1,n+1):
  b=int(input("Enter element:"))
  a.append(b)
a.sort()
print("Largest element is:",a[n-1])
```

```
Enter number of elements:4
Enter element:12
Enter element:3
Enter element:4
Enter element:23
Largest element is: 23
```

Python Program to put the even and odd elements in a list into two different lists

```
a=[]
n=int(input("Enter number of elements:"))
for i in range(1,n+1):
  b=int(input("Enter element:"))
  a.append(b)
even=[]
odd=[]
for j in a:
  if(j%2==0):
    even.append(j)
  else:
    odd.append(j)
print("The even list",even)
print("The odd list",odd)
```

```
Enter number of elements:4
Enter element:12
Enter element:23
Enter element:14
Enter element:21
The even list [12, 14]
The odd list [23, 21]
```

Python Program to merge two lists and sort it.

```
a=[]
c=[]
n1=int(input("Enter number of elements:"))
for i in range(1,n1+1):
  b=int(input("Enter element:"))
  a.append(b)
n2=int(input("Enter number of elements:"))
for i in range(1,n2+1):
  d=int(input("Enter element:"))
  c.append(d)
new=a+c
new.sort()
print("Sorted list is:",new)
```

```
Enter number of elements:4
Enter element:12
Enter element:14
Enter element:13
Enter element:9
Enter number of elements:4
Enter element:12
Enter element:23
Enter element:25
Enter element:12
Sorted list is: [9, 12, 12, 12, 13, 14, 23, 25]
```

Python Program to sort the list according to the second element in the sublist.

```
a=[['A',34],['B',21],['C',26],['E',29]]
for i in range(0,len(a)):
  for j in range(i+1,len(a)):
    if(a[i][1]>a[j][1]):
      temp=a[j]
      a[j]=a[i]
```

```
      a[i]=temp
print(a)
```

```
[['B', 21], ['C', 26], ['E', 29], ['A', 34]]
```

Python Program to find the second largest number in a list using bubble sort

```
a=[]
n=int(input("Enter number of elements:"))
for i in range(1,n+1):
  b=int(input("Enter element:"))
  a.append(b)
for i in range(0,len(a)):
  for j in range(0,len(a)-i-1):
    if(a[j]>a[j+1]):
      temp=a[j]
      a[j]=a[j+1]
      a[j+1]=temp
print('Second largest number is:',a[n-2])
```

```
Enter number of elements:4
Enter element:12
Enter element:14
Enter element:11
Enter element:15
Second largest number is: 14
```

Program to create a list of tuples with the first element as the number and the second element as the square of the number.

```
l_range=int(input("Enter the lower range:"))
u_range=int(input("Enter the upper range:"))
a=[(x,x**2) for x in range(l_range,u_range+1)]
print(a)
```

```
Enter the lower range:1
```

Python Program to generate random numbers from 1 to 20 and append them to the list

```
import random
a=[]
n=int(input("Enter number of elements:"))
for j in range(n):
  a.append(random.randint(1,20))
print('Randomised list is: ',a)
```

```
Enter number of elements:4
Randomised list is:  [2, 13, 18, 5]
```

Write python program to have a list of words to sort them from longest to shortest using list

of tuples

```
txt = 'but soft what light in yonder window breaks'
words = txt.split()
t = list()
for word in words:
 t.append((len(word), word))
t.sort(reverse=True)
res = list()
for length, word in t:
 res.append(word)
print(res)
```

```
['yonder', 'window', 'breaks', 'light', 'what', 'soft', 'but', 'in']
```

Python program that assigns variables

```
pair = ("dog", "cat")
# Unpack tuple.
(key, value) = pair
# Display unpacked variables.
print(key)
print(value)
```

```
dog
cat
```

Python program that searches tuples

```
pair = ("dog", "cat")
# Search for a value.
if "cat" in pair:
 print("Cat found")
# Search for a value not present.
if "bird" not in pair:
 print("Bird not found")
```

```
Cat found
Bird not found
```