Assignment No 6

#Acceptance of Percentages of students :

def Accept\_Percentage(perc):

numstud = int(input("Enter the number of students : "))

if numstud >= 5:

for i in range(numstud):

perc.append(float(input("Enter the percentage of student {0}: ".format(i+1))))

return perc

else :

print("Number Of students should be greater than or equal to 5 !")

#Display of roll numbers :

def Display\_Percentage(perc):

for i in range(len(perc)):

print(perc[i],"%")

# Function for Quick Sort of elements

def partition(perc, low, high):

pivot = perc[high]

i = low - 1

for j in range(low, high):

if perc[j] <= pivot:

i = i + 1

(perc[i], perc[j]) = (perc[j], perc[i])

(perc[i + 1], perc[high]) = (perc[high], perc[i + 1])

return i + 1

def Quick\_Sort(perc, low, high):

if low < high:

pi = partition(perc, low, high)

Quick\_Sort(perc, low, pi - 1)

Quick\_Sort(perc, pi + 1, high)

# Function for displaying top five percentages

def top\_Five(perc):

toplist = perc[::-1]

for i in range (0,5):

print(toplist[i])

#main

perc = []

flag = 1

while flag == 1 :

print("\n+---------------------MENU---------------------+")

print("1. Accept Student percentage of students ")

print("2. Display the percentage of Student ")

print("3. Sort percentage from the list using Quick\_Sort ")

print("4. Exit\n")

ch = int(input("Enter your choice (from 1 to 5) : "))

if ch == 1:

Accept\_Percentage(perc)

elif ch == 2:

Display\_Percentage(perc)

elif ch == 3:

size = len(perc)

Quick\_Sort(perc, 0, size - 1)

print('Sorted Array in Ascending Order:')

print(perc)

a=str(input("Do you want to display top five marks from the list ? (yes/no) : "))

if a=='yes':

top\_Five(perc)

else :

print(" Thank You For using this sorting teq ! \n")

flag = 0

elif ch == 4 :

print("Thank You For Using This Program ! \n")

else :

print("Enter a valid choice !!")

flag = 0

#ktcode

Output :

+---------------------MENU---------------------+

1. Accept Student percentage of students

2. Display the percentage of Student

3. Sort percentage from the list using Quick\_Sort

4. Exit

Enter your choice (from 1 to 5) : 1

Enter the number of students : 7

Enter the percentage of student 1: 41

Enter the percentage of student 2: 77

Enter the percentage of student 3: 88

Enter the percentage of student 4: 55

Enter the percentage of student 5: 31

Enter the percentage of student 6: 99

Enter the percentage of student 7: 48

+---------------------MENU---------------------+

1. Accept Student percentage of students

2. Display the percentage of Student

3. Sort percentage from the list using Quick\_Sort

4. Exit

Enter your choice (from 1 to 5) : 2

41.0 %

77.0 %

88.0 %

55.0 %

31.0 %

99.0 %

48.0 %

+---------------------MENU---------------------+

1. Accept Student percentage of students

2. Display the percentage of Student

3. Sort percentage from the list using Quick\_Sort

4. Exit

Enter your choice (from 1 to 5) : 3

Sorted Array in Ascending Order:

[31.0, 41.0, 48.0, 55.0, 77.0, 88.0, 99.0]

Do you want to display top five marks from the list ? (yes/no) : yes

99.0

88.0

77.0

55.0

48.0

+---------------------MENU---------------------+

1. Accept Student percentage of students

2. Display the percentage of Student

3. Sort percentage from the list using Quick\_Sort

4. Exit

Enter your choice (from 1 to 5) : 4

Thank You For Using This Program !