**Practical No.:-** 6

**Name:** Sattyam Sagar Chavan, AI&DS-B4 batch, Roll no: 73

**Input :-**

print("Name : Sattyam Sagar Chavan , Class : SE - AI&DS , Batch : B2 , Roll no : 73\n

OUTPUT :\n")

import array as arr

def accept\_perc():

a = arr.array('f', [])

no\_stud = int(input("Enter the number of Students : "))

for i in range(0, no\_stud):

a.append(float(input("Enter the First Year % of Student[{0}] : ".format(i))))

return a

def print\_perc(a):

for i in range(0, len(a)):

print("\t {0:.2f}".format(a[i]), end=" ")

print()

def partition(a, start, end):

pivot = a[start]

low = start + 1

high = end

while True:

while low <= high and a[high] >= pivot:

high = high - 1

while low <= high and a[low] <= pivot:

low = low + 1

if low <= high:

a[low], a[high] = a[high], a[low]

else:

break

a[start], a[high] = a[high], a[start]

return high

def quick\_sort(a, start, end):

if start >= end:

return

p = partition(a, start, end)

quick\_sort(a, start, p - 1)

quick\_sort(a, p + 1, end)

return a

def top\_five(a):

print("Top five score are : ")

cnt = len(a)

if cnt < 5:

start, stop = cnt - 1, -1 # stop set to -1 as we want to print the 0th element

else:

start, stop = cnt - 1, cnt - 6

for i in range(start, stop, -1):

print("\t {0:.2f}".format(a[i]), end=" ")

if \_\_name\_\_ == "\_\_main\_\_":

unsort\_A = arr.array('f', [])

quick\_sort\_A = arr.array('f', [])

flag = 1

while flag == 1:

print("\n 1. Accept array elements \n 2. Display the Elements \n 3. Quick Sort \n 4.exit")

choice = int(input("Enter your choice : "))

if choice == 1:

unsort\_A = accept\_perc()

elif choice == 2:

print\_perc(unsort\_A)

elif choice == 3:

print("Elements after sorting using Sort :")

quick\_sort\_A = quick\_sort(unsort\_A, 0, len(unsort\_A) - 1)

print\_perc(quick\_sort\_A)

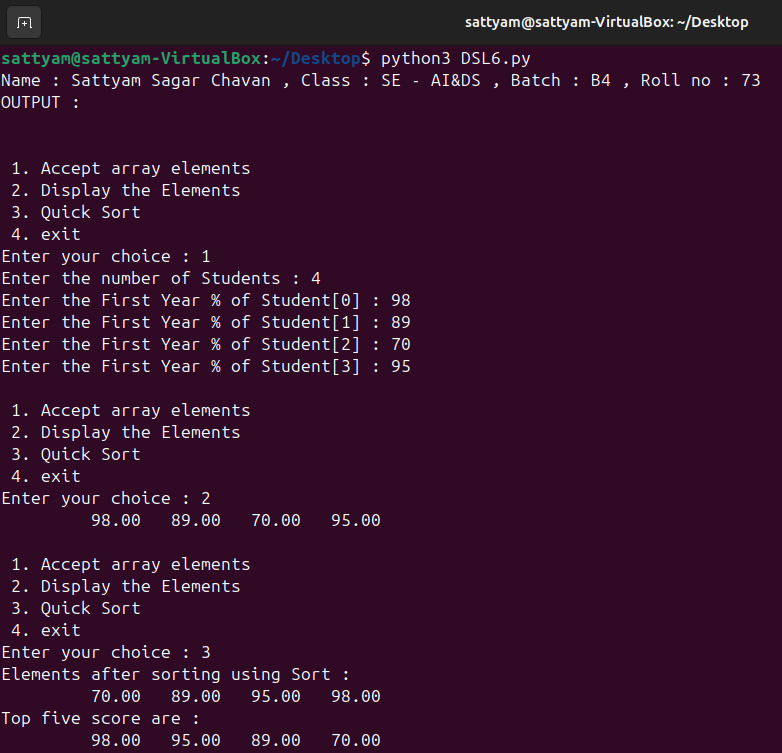
top\_five(quick\_sort\_A)

else:

print("Wrong choice")

flag = 0v

**Output :**

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