**Practical No:-6**

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**Exam Seat No - S190842009**

Title:-

"""

Group B - Assingment 6

using quick sort and display top five scores.

"""

INPUT:-

def accept\_array(A):

n = int(input("Enter the total no. of student : "))

for i in range(n):

x = float(input("Enter the first year percentage of student %d : "%(i+1)))

A.append(x)

print("Array accepted successfully\n\n");

def display\_array(A):

n = len(A)

if(n == 0) :

print("\nNo records in the database")

else :

print("Array of FE Marks : ",end=' ')

for i in range(n) :

print("%.2f "%A[i],end=' ')

print("\n");

def partition(A,s,l) :

b=s+1

e=l

while(e>=b) :

while(b<=l and A[s] >= A[b]) :

b = b + 1

while(A[s] <A[e]) :

e = e - 1

if(e>b) :

temp = A[e]

A[e] = A[b]

A[b] = temp

temp = A[s]

A[s] = A[e]

A[e] = temp

return e

def Quicksort(A,s,l) :

if(s<l) :

mid =partition(A,s,l)

Quicksort(A,s,mid-1)

Quicksort(A,mid+1,l)

def Main() :

A =[]

while True :

print ("\t1 : Accept & Display the FE Marks")

print ("\t2 : Quick sort ascending order and display top five scores")

print ("\t3 : Exit")

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

if (ch ==3):

print ("End of Program")

quit()

elif (ch==1):

A = []

accept\_array(A)

display\_array(A)

elif (ch==2):

print("Marks before sorting")

display\_array(A)

n =len(A)

Quicksort(A,0,n-1)

print("Marks after sorting")

display\_array(A)

if(n >= 5) :

print("Top Five Scoers : ")

for i in range(n-1,n-6,-1) :

print("\t%.2f"%A[i])

else :

print("Top Scores : ")

for i in range(n-1,-1,-1) :

print("\t%.2f"%A[i])

else :

print ("Wrong choice entered !! Try again")

Main()

OUTPUT:-

jaihind@jaihind-ThinkCentre-M60e:~$ python3 yash6.py

1 : Accept & Display the FE Marks

2 : Quick sort ascending order and display top five scores

3 : Exit

Enter your choice : 1

Enter the total no. of student : 2

Enter the first year percentage of student 1 : 56

Enter the first year percentage of student 2 : 89

Array accepted successfully

Array of FE Marks : 56.00 89.00

1 : Accept & Display the FE Marks

2 : Quick sort ascending order and display top five scores

3 : Exit

Enter your choice : 2

Marks before sorting

Array of FE Marks : 56.00 89.00

Marks after sorting

Array of FE Marks : 56.00 89.00

Top Scores :

89.00

56.00

1 : Accept & Display the FE Marks

2 : Quick sort ascending order and display top five scores

3 : Exit

Enter your choice : 3

End of Program