Practical 6

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'''Write a python program to store first year percentage of students in array. Write function for sorting

array of floating point numbers in ascending order using quick sort and display top five scores. '''

import array as a

def partition (m,lb,ub):

pivot=m[lb]

s=lb+1

e=ub

while (s<=e):

while (m[s] <= pivot and s <= ub):

s=s+1

while (m[e]>pivot):

e=e-1

if (s<e):

t=m[s]

m[s]=m[e]

m[e]=t

temp=m[e]

m[e]=pivot

pivot=temp

return e

def quick\_sort(m,lb,ub):

if(lb<ub):

loc=partition(m,lb,ub)

quick\_sort(m, lb,loc-1)

quick\_sort(m, loc+1,ub)

def dis(m):

print("student after storting")

for k in range (0,len(m)):

print("%.2f"%m[k])

def main():

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

l=int(input("enter number of student :"))

print ("enetr percentage of student")

for i in range(0,l):

print("student ",i+1)

e=float(input())

arr.append(e)

print("students percentage before quick sort =")

for n in range (0,l):

print("%.2f"%arr[n])

flag=1;

while True:

print("Menu:")

print("1. quick Sort of the percentage")

print("2. top 5 student")

print("3. Exit")

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

if choice == 1:

quick\_sort(arr,0,l-1)

dis(arr)

elif choice == 2:

if (l<5):

print (l ,"topper are :")

for t in range (l-1,0-1,-1):

print("%.2f" %arr[t])

else:

print("5 toppers students :")

for k in range (l-1,l-6,-1):

print("%.2f" %arr[k])

elif choice == 3:

break

else:

print("Invalid choice. Please enter a valid option.")

main()

OUTPUT

