**Zeal College of Engineering and Research**

**Subject: DSL**

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Roll\_No: S211055

**Group B: Practical No: 06**

**Program Statement**:

Write a Python program to store second year percentage of students in array. Write function for sorting array of floating point numbers in ascending order using

1. Insertion sort
2. Shell Sort and display top five scores

**Code:**

# -\*- coding: utf-8 -\*-

"""

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"""

# Pratical 2 of Group B

"""Storing the Percantage of Students"""

percentage = []

student = int(input("Enter the Number of student:"))

for i in range(student):

  marks = float(input("Enter the Percentage of 2nd Year Student:"))

  percentage.append(marks)

print(percentage)

def inserstion\_sort():

  for i in range(1,len(percentage)):

      key = percentage[i]

      j = i-1

      while j >= 0 and key < percentage[j] :

          percentage[j + 1] = percentage[j]

          j =j- 1

      percentage[j + 1] = key

def shell\_sort(percentage,n):

    gap = n // 2

    while gap > 0:

        for i in range(gap, n):

            temp = percentage[i]

            j = i

            while j >= gap and percentage[j - gap] > temp:

                percentage[j] = percentage[j - gap]

                j = j - gap

            percentage[j] = temp

        gap = gap // 2

#Getting all the input from user

while True:

  a = int(input("Enter your choice:\nInsertion sort \nShell sort"))

  if a == 1:

    inserstion\_sort()

    print(percentage)

  elif a == 2:

    shell\_sort(percentage, len(percentage))

    print(percentage)

  else:

    print("Thank you")

**Output (Screenshot):** 