LAB ASSIGNMENT- 3 Total Mark: 30

1. Write a C program that takes an integer input from the user and determines whether the entered number is positive, negative, or zero. Display a message indicating the result. [2 Mark]

2. Determine the largest Integer among three Integers using if-else statements. [3 mark]

3. Given three positive Integers a,b,c. Determine if a,b,c are sides of a triangle using if-else statements. [5 mark]

4. Given three points (x1, y1), (x2, y2) and (x3, y3), write a program to check if all the three points fall on one straight line. [5 mark]

5. A library charges a fine for every book returned late.For first 5 days the fine is 1 rupee, for 6-10 days the fine is 2 rupees and above 10 days the fine is 5 rupees. If you return the book after 30 days your membership will be canceled. Write a program to accept the number of days the member is late to return the book and display the fine or the appropriate message.

6. Write a C program to check whether a given number is Kaprekar Number. A Kaprekar number is a number if its square can be divided into two parts in a way so that the sum of parts is equal to the original number and none of the parts has value 0. [5 mark]

   Example: 45
   45^2 = 2025 = 20 + 25 = 45
   Yes; 45 is Kaprekar number.

7. Your score of PDS Lab is determined as follows: [5 mark]

   Final Score (T) = Marks obtained (M) X Attendance weight (W)
   Attendance weight (W) = no of classes attended (N) / Total number of classes conducted (K).

Then your grade is decided as follows:

T >= 90 -> Grade = EX
T >= 80 and T < 89 -> Grade = A
T >= 70 and T< 79 -> Grade = B
T > = 60 and T < 69 -> Grade = C
T > = 50 and T < 59 -> Grade = D
T > = 40 and T < 49 -> Grade = P
T < 40 -> Grade = F

Read the values of M, N and K such that M is between 0 and 100; N < = K and print Final score and Grade in the following format:

Final Score = 65
Grade is = C