TOPICS: **Allowed Time:** 70 Minutes
Instructions: **Total Marks:** 45

1. Gossips are not allowed.
2. Teacher assistants are for your help, so be nice with them. Respect them as they are teaching you. Raise your hands if you have some problem and need help from TA. Avoid calling them by raising your voice and disturbing the environment of Lab.
3. TA may deduct your marks for any kind of ill-discipline or misconduct from your side.
4. Evaluation will be considered final and you cannot debate for the marks. So, focus on performing the tasks when the time is given to you.

Task 01: (5 Marks, 10 min)

Take input of 5 students' marks. Sort them in **descending** order using bubble sort. Print sorted marks.

Task 02: (5 Marks, 10 min)

Write a C program that takes a string and a replacement character from the user, then replaces all spaces in the string with the specified character.

Task 03: (10 Marks, 15 min)

Your application requires users to enter a username that must be one word only (no spaces) and contain only alphabets.
Write a program that:
Takes a string input using scanf
Rejects input with spaces or non-alphabetic characters
Prints "Valid username" or "Invalid username"

Task 04: (10 Marks, 15 min)

Write a C program to convert a numeric string (e.g., "1234") into its corresponding integer value. Do it both ways using built-in function and manually.
Example:
Input: "456"
Output: 456

Task 05: (15 Marks, 20 min)

Given two strings s and goal, return true if you can swap two letters in s so the result is equal to goal, otherwise, return false.
Swapping letters is defined as taking two indices i and j (0-indexed) such that i != j and swapping the characters at s[i] and s[j].
For example, swapping at indices 0 and 2 in "abcd" results in "cbad".
Example 1:
Input: s = "**ab**", goal = "**ba**"
Output: true
Explanation: You can swap s[0] = 'a' and s[1] = 'b' to get "ba", which is equal to goal.

Example 2:
Input: s = "**ab**", goal = "**ab**"
Output: false
Explanation: The only letters you can swap are s[0] = 'a' and s[1] = 'b', which results in "ba" != goal.