SOMAIYA VIDYAVIHAR UNIVERSITY
K J Somaiya School of Engineering

K. J. Somaiya School of Engineering, Mumbai-77

(Somaiya Vidyavihar University)

Somaiya TRUST

Course:	Programming in C			**Semester:**	II	**Date:**	
Division:		**Batch:**		**SET**	A	**Name:**	
Exam:	OST			**Time:**		**Roll No:**	

<table>
<tr><th>Q 1</th><th>Attempt Any ONE [Show all test Cases in Output]</th><th>Marks</th></tr>
<tr><td>1</td><td>Write a Program which satisfy following conditions
Using conditional operators determine:
(1) Whether the character entered through the keyboard is a lower case alphabet or not.
(2) Whether a character entered through the keyboard is a special symbol or not.
<table>
<tr><td><b>Test Case 1:
Enter a character: g
The character is a lowercase alphabet.
The character is NOT a special symbol.</b></td><td><b>Test Case 2
:Enter a character: 5
The character is NOT a lowercase alphabet.
The character is NOT a special symbol</b></td><td><b>Test Case 3:
Enter a character: @
The character is NOT a lowercase alphabet.
The character is a special symbol</b></td></tr>
</table>
<b>Input character from user 1 marks
Check if lowercase alphabet using conditional operator 3 marks
Check if special symbol using conditional operator 3 marks
Check all test cases 1 marks</b></td><td>08</td></tr>
<tr><td>2</td><td>Write a C program to find and print all unique elements in an array. The program should first take the size of the array as input. Then, it should take array elements from the user. Finally, the program should display all the elements that appear only once in the array.
<table>
<tr><td><b>Test Case 1:
n = 6, [1, 2, 3, 2, 3, 4]
Unique elements : 1 4</b></td><td><b>Test Case 2:
n = 5, [5, 5, 5, 5, 5]
No Unique Elements</b></td><td><b>Test Case 3:
n = 4, [7, 8, 9, 10]
Unique elements:7 8 9 10</b></td></tr>
</table>
<b>Taking input for array size & array elements 2 marks
Find and print all unique elements in an array 5 marks
Check all test cases 1 marks</b></td><td>08</td></tr>
</table>

<table>
<tr><th>Q 2</th><th>Attempt Any ONE [Show all test Cases in Output]</th><th>Marks</th></tr>
<tr><td>1</td><td>The program takes the number of students as input. It stores marks in an array from user-input. It uses user-defined functions to:
● Input the marks in array
● Identify the second-highest mark.
● Allow the teacher to update a student’s mark by entering the student index.
● Display Marks
Use Menu-Driven Programme.</td><td>12</td></tr>
</table>

<table>
<tr>
<td></td>
<td>
<table>
<tr>
<td><b>Test Case 1:</b>
<b>Enter the number of students: 5</b>
<b>Enter marks of 5 students: 45 78 90 78 65</b>

<b>Second-highest mark: 78</b>
<b>Enter student index to update (0 to 4): 2</b>
<b>Enter new mark: 85</b>
<b>Updated marks: 45 78 85 78 65</b></td>
<td><b>Test Case 2:</b>
<b>Enter the number of students: 3</b>
<b>Enter marks of 3 students: 60 70 80</b>

<b>Enter student index to update (0 to 2): 2</b>
<b>Enter new mark: 50</b>
<b>Updated marks: 60 70 50</b>
<b>Second-highest mark: 60</b></td>
</tr>
</table>
<b>Function to Input mark 2 marks</b>
<b>Function to find the Second highest mark 3 marks</b>
<b>Function to update mark 3 marks</b>
<b>Function to display mark 2 marks</b>
<b>Implement Switch-case 2 marks</b>
</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>
A music player app stores song IDs in an array. A user requests the following feature. (Input / Sort / reverse / display) Use Menu-Driven Programme.
Requirements:
A. The program should take the number of songs as user input.
B. The program should have a function to take input from the user and store song IDs in an array.
C. Sort the playlist in ascending order.
D. The program should have a function to reverse the playlist.
E. The program should display the playlist.
F. All functions should be implemented using Pointer.
<table>
<tr>
<td><b>Test Case 1:</b>
<b>Enter the number of songs: 4</b>
<b>Enter 4 song IDs: 88 66 99 77</b>

<b>Original Playlist: 88 66 99 77</b>
<b>Sorted Playlist: 66 77 88 99</b>
<b>Reversed Playlist: 99 88 77 66</b></td>
<td><b>Test Case 2:</b>
<b>Enter the number of songs: 5</b>
<b>Enter 5 song IDs: 505 101 404 202 303</b>

<b>Original Playlist: 505 101 404 202 303</b>
<b>Reversed Playlist: 303 202 404 101 505</b>
<b>Sorted Playlist: 101 202 303 404 505</b></td>
</tr>
</table>
<b>Function to inputPlaylist using pointers 2 marks</b>
<b>Function to Sort the list using pointers 3 marks</b>
<b>Function to reverse the playlist using pointers 3 marks</b>
<b>Function to display the playlist using pointer 2 marks</b>
<b>Implement Switch-case 2 marks</b>
</td>
<td>12</td>
</tr>
</table>