

**Saylani Mass IT Training Program
Batch-10 (Section-MWF)
Trainer : Raja Muhammad Ehsan**

Note:

1. Each question is mandatory to be completed. Incomplete solutions will be marked zero.
2. Total marks of the paper are 50 (25+25), each question carries 25 marks.

Problem 1: Random Password Generator (25 marks)

Write a JavaScript program that generates a random password for a user. The password should meet the following criteria:

1. The password should be a string of a specified length, which is provided by the user.
2. The password should contain a mix of uppercase letters, lowercase letters, numbers, and special characters.
3. The characters in the password should be randomly selected.
4. The user should be able to specify the length of the password.

Below are the data examples to achieve your goal:

- a. Uppercase letters: A-Z
- b. Lowercase letters: a-z
- c. Numbers: 0-9
- d. Special characters (e.g., !@#\$%^&*()-_+=): You can define your own set of special characters.

Sample Input1:	Sample Output1:
Enter the password length : 12	Generated password: aB5\$yZ@#9pQ1

Sample Input2:	Sample Output2:



Enter the password length : 10	Generated password: yMO9#^1@2P
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Problem 2: Even Odd Separation & Sorting (25 marks)

You are working on a JavaScript program that needs to take an array of numbers, separate them into even and odd numbers, and then display both sets of numbers sorted in ascending order.

1. Separating Even and Odd Numbers:

First, you need to write a JavaScript function that takes an array of numbers and separates them into two arrays: one for even numbers and one for odd numbers. For example, if the input array is [5, 2, 9, 4, 7, 6], the even array should be [2, 4, 6], and the odd array should be [5, 9, 7].

- ### 2. Sorting the Arrays: (You cannot use sort() method of javascript - write your own logic to implement sorting using functions)
- ### 3. Displaying the Sorted Arrays:

Finally, you should display the sorted even and odd arrays to the user, so they can see the even and odd numbers sorted in ascending order.

Note : the use of function is mandatory for this question. To separate even and odd you can use a user defined function like the one below:

- a. `separate("even" , data) || separate("odd" , data)` and for separating.
- b. `sortMyData(data)`.





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