Computer Science Division
Department of Mathematics
Faculty of Science

Level 2 - Spring Semester
Course Code: COMP 206
Date: March 5, 2024

Sheet 2

Objective: upon successful completion of this sheet, students should be able to create functions, handle events, and deal with arrays and strings.

(1) Write a JavaScript program that allows users to input a series of numbers separated by dashes in a text field. When the user clicks the "Show Primes" button, the program should perform the following tasks: (a) store the entered data in an array and (b) list the prime numbers from the array in a tabular format. You should make use of the `find()` method in your implementation.

(2) Write a JavaScript program that processes a string input and produces a string output according to the following rule: keep all characters at the odd positions unchanged and swap each two characters at consecutive even positions (i.e., position `0` with `2`, position `4` with `6`, etc.). For example, if the input string is `"abcdefghi"`, then the expected output should be `"cbadgfehi"`.

(3) Write a JavaScript program that stores entries from text fields into an array of student objects when the user clicks the "Add Student" button. Each student object in the array should have properties for name, age, and GPA. The program should provide a drop-down list to select the sorting order: descending order by GPA or ascending order by name. The program should display the sorted results in a text area. In addition, if the number of students with a GPA less than `2` exceeds `3`, then an alert message should be displayed. The form design is shown in the provided figure.
N.B. You should use the `"change"` event on the `<select>` HTML tag for handling the sorting order choice.

(4) Write a JavaScript program that accepts an array of words and returns a new array containing only the words that have no repeated characters. You should make use of the `find()` method in your implementation.