



Sheet 6

Objective: upon successful completion of this sheet, the students should be able to handle events with DOM and BOM objects.

Write a TypeScript program that contains the form depicted in the figure below. The user input in the form elements should be validated when the form is submitted according to the following rules.

- The “username” field should be non-empty and contain between 6 and 12 characters.
- The “password” field must be at least 6 characters and should have at least 1 uppercase and 1 lowercase letters.
- The user must choose a semester level.
- The user should not have taken the course COMP 206 before if the semester level is first or second.
- If the user selects to receive the newsletter, an alert message about potential spam is shown.
- The user will be notified if the input value for a field is invalid by turning the label for the invalid field to red, as shown below. When the user focuses on any form element, the red label turns back to its original formatting.

The image shows a registration form with the following fields and controls:

- Username:** A text input field with placeholder text "Enter your Username...".
- Password:** A text input field with placeholder text "Enter your Password...".
- Semester:** A dropdown menu with the text "Select your Semester Level".
- Courses Taken:** Three checkboxes labeled "COMP 102", "COMP 206", and "Math 101".
- Sign up for news letter:** A checkbox.
- Register:** A button.

The image shows the registration form with validation errors. The labels for "Username:", "Password:", and "Semester:" are red. The "Username" field contains the text "Ahmed". The "Password" field contains the text "Enter your Password...". The "Semester" dropdown menu is open, showing the text "Select your Semester Level". The "Courses Taken" and "Sign up for news letter" checkboxes are still present.

- If the user input is valid for all the form elements, create a text area and display the form data in it (as shown below).
- When the user clicks or hovers the text area, a confirmation message for submitting the form is shown.
- If the user clicks the “ok” button, then the form is submitted, and a new window will appear containing the following message “Thanks for your registration”. This appearing message will then continue to flicker, constantly changing its color and size on short time intervals.

The image shows the registration form with valid input. The "Username" field contains "AhmedAli", the "Password" field contains "*****", and the "Semester" dropdown menu is set to "2nd". The "Courses Taken" checkboxes for "COMP 102" and "Math 101" are checked, while "COMP 206" is unchecked. The "Sign up for news letter" checkbox is unchecked. The "Register" button is visible. Below the form, a text area displays the following information:

```
AhmedAli
Semester: 2
Courses taken
COMP102
Math101
```