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Supplementary Mid-Semester Exam Questions

Planning and designing a simple web application to validate a registration form with username, email, and password.

Answers

(A.i).
```html
<!DOCTYPE html>
    <html lang="en">
    <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

(A.ii).
```html
<title>Form Validator</title>
```
(A.iii).
```html
<script src="script.js" defer></script>
    </head>

    <body>
```
(B.i).
```html
<form id="registrationForm" onsubmit="return validateForm()">
    <label for="username">Username:</label>
```
(B.ii).
```html
<input type="text" id="username" name="username" required>

    <label for="email">Email:</label>
```
(B.iii).
```html
<input type="email" id="email" name="email" required>
```

(B.iv).
```html
<label for="password">Password:</label>
    <input type="password" id="password" name="password" required>
```

(B.v).
```html
<input type="submit" value="Submit">
    </form>
    </body>
    </html>
```

The JavaScript Section

```javascript
function validateForm() {
//  (C.i)  Getting relevant elements
var usernameInput = document.getElementById("username");
var emailInput = document.getElementById("email");
var passwordInput = document.getElementById("password");

// (C.ii)  Validating username to be at least 3 characters long
```

```javascript
if (usernameInput.value.length < 3) {
alert("Username must be at least three characters long.");
return false;
}

// (C.iii) Validating email using a simple pattern
var emailPattern = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
if (!emailPattern.test(emailInput.value)) {
alert("Invalid email address.");
return false;
}

// (C.iv) Validating password length to be at least 6 characters long
if (passwordInput.value.length < 6) {
alert("Password must be at least six characters long.");
return false;
}

// (C.v) If all validations pass, submit the form
return true;
}
```