

WEB TECHNOLOGY AND MOBILE APPLICATION
REGISTRATION NUMBER: 231501102
DEPT AND SECTION: AIML- "FA"
SUBJECT CODE : AI234231

8) Consider a Library Management System. Develop a JavaScript program that will validate the controls in the forms you have created for the application. State the assumptions you make (business logic you are taking into consideration). Note: Your application must access a database using Servlet/JSP

AIM:

The goal of this JavaScript program is to validate the forms of a Library Management System (LMS).

ALGORITHM:

- When the user fills the form and submits it, trigger the validation function.
- Check each field to ensure it meets the specified requirements.
-

If any field is invalid, show an error message to the user and prevent the form from submitting.

- If all fields are valid, the form will be submitted to the server (Servlet/JSP) for database processing

SOURCE CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Library Management System - Validation</title>
  <script type="text/javascript">
    function validateAddBookForm() {
      let title = document.getElementById("title").value;
      let author = document.getElementById("author").value;
      let year = document.getElementById("year").value;
      let isbn = document.getElementById("isbn").value;

      if (title == "" || author == "") {
        alert("Title and Author are required fields.");
        return false;
      }
    }
  </script>
</head>
</html>
```

```
}
```

```
if (isNaN(year) || year < 1900 || year > 2025) {  
    alert("Please enter a valid year between 1900 and 2025.");  
    return false;  
}
```

```
if (!/^d{13}$/.test(isbn)) {  
    alert("Please enter a valid 13-digit ISBN.");  
    return false;  
}
```

```
return true;  
}
```

```
function validateRegisterUserForm() {  
    let username = document.getElementById("username").value;  
    let email = document.getElementById("email").value;  
    let password = document.getElementById("password").value;  
    let contact = document.getElementById("contact").value;
```

```
if (username == "") {  
    alert("Username is required.");  
    return false;  
}
```

```
let emailRegex = /^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,4}$/;
```

```
if (!emailRegex.test(email)) {  
    alert("Please enter a valid email.");  
    return false;  
}
```

```
if (password.length < 8 || !/\d/.test(password) || !/[a-zA-Z]/.test(password)) {  
    alert("Password should be at least 8 characters long and contain both letters and numbers.");  
    return false;  
}
```

```
if (!/^\\d{10}$/.test(contact)) {  
    alert("Please enter a valid 10-digit contact number.");  
    return false;  
}
```

```
    return true;  
}
```

```
function validateBorrowBookForm() {  
    let userId = document.getElementById("userId").value;  
    let bookId = document.getElementById("bookId").value;
```

```
    if (userId == "" || bookId == "") {  
        alert("User ID and Book ID are required.");  
        return false;  
    }
```

```
        return true;
    }
</script>
</head>
<body>
```

```
<h2>Add New Book</h2>
<form onsubmit="return validateAddBookForm()" action="AddBookServlet" method="POST">
    Title: <input type="text" id="title" name="title"><br>
    Author: <input type="text" id="author" name="author"><br>
    Year of Publication: <input type="text" id="year" name="year"><br>
    ISBN: <input type="text" id="isbn" name="isbn"><br>
    <input type="submit" value="Add Book">
</form>
```

```
<h2>Register User</h2>
<form onsubmit="return validateRegisterUserForm()" action="RegisterUserServlet" method="POST">
    Username: <input type="text" id="username" name="username"><br>
    Email: <input type="text" id="email" name="email"><br>
    Password: <input type="password" id="password" name="password"><br>
    Contact Number: <input type="text" id="contact" name="contact"><br>
    <input type="submit" value="Register">
</form>
```

```
<h2>Borrow Book</h2>
<form onsubmit="return validateBorrowBookForm()" action="BorrowBookServlet" method="POST">
    User ID: <input type="text" id="userId" name="userId"><br>
    Book ID: <input type="text" id="bookId" name="bookId"><br>
    <input type="submit" value="Borrow Book">
</form>
```

```
</body>  
</html>
```

RESULT:

If the user tries to submit the form with invalid data, an alert will notify them of the issue, and the form will not be submitted. The user will need to correct the fields before submission.

OUTPUT:

