1) **Difference between JSON and XML**:

JSON (JavaScript Object Notation) and XML (eXtensible Markup Language) are both widely used formats for representing structured data. The main differences between them are:

- JSON is more lightweight and easier for humans to read and write compared to XML.

- XML supports namespaces, which allow for better organization and structuring of data, while JSON does not have a built-in namespace concept.

- JSON is more commonly used for data interchange in web applications, especially those using JavaScript, while XML is often used in environments where there is a need for strong schema validation and document structure.

2) **Create 3 XML and JSON files for department, year, student**:

XML files:

- department.xml:

```
<department>
    <name>Computer Science</name>
</department>
```

- year.xml:

```
<year>
    <value>2024</value>
</year>
```

- student.xml:

```
<student>
    <name>John Doe</name>
    <age>20</age>
```

```xml
        <department>Computer Science</department>

        <year>2024</year>

    </student>
```

JSON files:

- department.json:

```json
    {

        "name": "Computer Science"

    }
```

- year.json:

```json
    {

        "value": 2024

    }
```

- student.json:

```json
    {

        "name": "John Doe",

        "age": 20,

        "department": "Computer Science",

        "year": 2024

    }
```

3) **Create a file with department as root, year as subroot, and student as an element**:

XML file (department_year_student.xml):

```xml
<department>
    <year>2024</year>
    <student>
        <name>John Doe</name>
        <age>20</age>
    </student>
</department>
```

4) **Difference between Authorization and Authentication**:

   - Authentication is the process of verifying the identity of a user, typically by asking for credentials like username and password.

   - Authorization is the process of determining whether a user has permission to access certain resources or perform certain actions after they have been authenticated.

5) **Create a Login Screen**:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Login</title>
</head>
<body>
    <form action="/login" method="post">
        <label for="username">Username:</label><br>
```

```html
            <input type="text" id="username" name="username"><br>

            <label for="password">Password:</label><br>

            <input type="password" id="password" name="password"><br><br>

            <input type="submit" value="Login">

        </form>

    </body>

</html>
```

6) **Create a User Creation Screen using all elements (List, Radio button, Drop down, CheckBox)**:

```html
    <!DOCTYPE html>

    <html lang="en">

    <head>

        <meta charset="UTF-8">

        <meta name="viewport" content="width=device-width, initial-scale=1.0">

        <title>User Creation</title>

    </head>

    <body>

        <form action="/create-user" method="post">

            <label for="username">Username:</label><br>

            <input type="text" id="username" name="username"><br>

            <label for="password">Password:</label><br>

            <input type="password" id="password" name="password"><br>

            <label for="role">Role:</label><br>

            <select id="role" name="role">

                <option value="admin">Admin</option>
```

```html
            <option value="user">User</option>

        </select><br>

        <label>Gender:</label><br>

        <input type="radio" id="male" name="gender" value="male">

        <label for="male">Male</label><br>

        <input type="radio" id="female" name="gender" value="female">

        <label for="female">Female</label><br>

        <label for="department">Department:</label><br>

        <input list="departments" id="department" name="department">

        <datalist id="departments">

            <option value="IT">

            <option value="Finance">

            <option value="HR">

        </datalist><br>

        <input type="checkbox" id="terms" name="terms">

        <label for="terms">I agree to the terms and conditions</label><br><br>

        <input type="submit" value="Create User">

    </form>

</body>

</html>
```

7) **List all Users, Update user, and Delete user (Popup for confirmation, e.g., "Are you sure you want to delete")**:

```html
<!DOCTYPE html>

<html lang="en">

<head>
```

```html
        <meta charset="UTF-8">

        <meta name="viewport" content="width=device-width, initial-scale=1.0">

        <title>User Management</title>

        <script>

            function deleteUser(userId) {

                if (confirm("Are you sure you want to delete this user?")) {

                    // Code to delete user with userId

                }

            }

        </script>

    </head>

    <body>

        <h1>List of Users</h1>

        <ul>

            <li>User 1 <button onclick="deleteUser(1)">Delete</button></li>

            <li>User 2 <button onclick="deleteUser(2)">Delete</button></li>

            <li>User 3 <button onclick="deleteUser(3)">Delete</button></li>

        </ul>

    </body>

    </html>
```

8) **Create an HTML page with Google Map**:

```html
    <!DOCTYPE html>

    <html>

    <head>

        <title>Google Maps Example</title>
```

```html
        <style>

            #map {

                height: 400px;

                width: 100%;

            }

        </style>

    </head>

    <body>

        <h1>Google Maps Example</h1>

        <div id="map"></div>

        <script>

            function initMap() {

                var location = {lat: -25.363, lng: 131.044}; // Example location

                var map = new google.maps.Map(document.getElementById('map'), {

                    zoom: 4,

                    center: location

                });

                var marker = new google.maps.Marker({

                    position: location,

                    map: map

                });

            }

        </script>

        <script src="https://maps.googleapis.com/maps/api/js?key=YOUR_API_KEY&callback=initMap" async defer></script>

    </body>
```

```
</html>
```

Replace `YOUR_API_KEY` with your actual Google Maps API key.

9) **Create an HTML page with a Video file**:

```html
<!DOCTYPE html>

<html>

<head>

    <title>Video Example</title>

</head>

<body>

    <h1>Video Example</h1>

    <video width="320" height="240" controls>

        <source src="movie.mp4" type="video/mp4">

        Your browser does not support the video tag.

    </video>

</body>

</html>
```

10) **Create an HTML page with an Audio file**:

```html
<!DOCTYPE html>

<html>

<head>

    <title>Audio Example</title>
```

```
    </head>

    <body>

        <h1>Audio Example</h1>

        <audio controls>

            <source src="audio.mp3" type="audio/mpeg">

            Your browser does not support the audio element.

        </audio>

    </body>

    </html>
```

11) **Create an HTML page to upload a file**

```
    <!DOCTYPE html>

    <html>

    <head>

        <title>File Upload Example</title>

    </head>

    <body>

        <h1>File Upload Example</h1>

        <form action="/upload" method="post" enctype="multipart/form-data">

            <input type="file" name="fileToUpload" id="fileToUpload">

            <input type="submit" value="Upload File" name="submit">

        </form>

    </body>

    </html>
```