#### **Exercise 1.html**

```
<html>
<head>
<script>
function VALIDATEDETAIL()
var name = document.forms["RegForm"]["Name"];
var email = document.forms["RegForm"]["EMail"];
var phone = document.forms["RegForm"]["Telephone"];
var what = document.forms["RegForm"]["Subject"];
var password = document.forms["RegForm"]["Password"];
var address = document.forms["RegForm"]["Address"];
  if (name.value == "")
    window.alert("Please enter your name.");
    name.focus();
    return false;
  }
  if (address.value == "")
  {
    window.alert("Please enter your address.");
    name.focus();
    return false;
  }
  if (email.value == "")
  {
```

```
window.alert("Please enter a valid e-mail address.");
     email.focus();
     return false;
  }
  if (email.value.indexOf("@", 0) < 0)
{
     window.alert("Please enter a valid e-mail address.");
     email.focus();
     return false;
  if (email.value.indexOf(".", 0) < 0)
     window.alert("Please enter a valid e-mail address.");
     email.focus();
     return false;
   }
  if (phone.value == "")
     window.alert("Please enter your telephone number.");
     phone.focus();
     return false;
  }
  if (password.value == "")
     window.alert("Please enter your password");
     password.focus();
     return flase;
  }
```

```
if (what.selectedIndex < 1)
  {
    alert("Please enter your course.");
     what.focus();
    return false;
  }
  return true;
}</script>
 <style>
VALIDATEDETAIL {
  font-weight: bold;
  float: left;
  width: 100px;
  text-align: left;
  margin-right: 10px;
  font-size:14px;
}
div {
box-sizing: border-box;
  width: 100%;
  border: 100px solid black;
  float: left;
  align-content: center;
  align-items: center;
}
form {
  margin: 0 auto;
  width: 600px;
```

```
}</style></head>
<body>
<h1 style="text-align: center"> REGISTRATION FORM </h1>
<form name="RegForm" action="submit.php" onsubmit="return VALIDATEDETAIL()"</pre>
method="post">
  Name: <input type="text" size=65 name="Name"> <br>
   Address: <input type="text" size=65 name="Address"> <br/>br>
  E-mail Address: <input type="text" size=65 name="EMail"> <br>
  Password: <input type="text" size=65 name="Password"> <br>
  Telephone: <input type="text" size=65 name="Telephone"> <br>
  SELECT YOUR COURSE
    <select type="text" value="" name="Subject">
      <option>BTECH</option>
      <option>BBA</option>
      <option>BCA</option>
      <option>B.COM</option>
      <option>VALIDATEDETAIL
    </select><br><br>
  Comments: <textarea cols="55" name="Comment"> </textarea>
  <input type="submit" value="send" name="Submit">
    <input type="reset" value="Reset" name="Reset">
</form>
</body>
</html>
```

```
Style.css
```

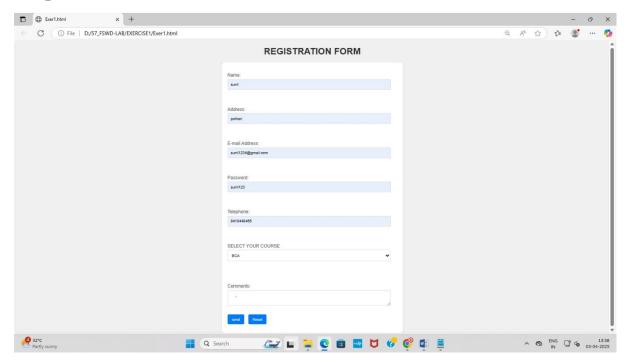
```
body {
 font-family: sans-serif;
 background-color: #f0f0f0; /* Light gray background */
 margin: 0;
 padding: 0;
 display: flex;
 flex-direction: column; /* Stack elements vertically */
 align-items: center;
 min-height: 100vh;
}
h1 {
 text-align: center;
 color: #333; /* Dark gray title */
 margin-top: 20px;
 margin-bottom: 20px;
}
form {
 background-color: #fff; /* White form background */
 padding: 20px;
 border-radius: 8px;
 box-shadow: 0 2px 5px rgba(0, 0, 0, 0.1);
 width: 500px;
 max-width: 90%;
 margin-bottom: 20px; /* Space between form and buttons */
}
p {
```

```
margin-bottom: 10px;
 color: #555;
}
input[type="text"],
select,
textarea {
 width: calc(100% - 22px);
 padding: 10px;
 margin-top: 5px;
 margin-bottom: 15px;
 border: 1px solid #ddd;
 border-radius: 4px;
 box-sizing: border-box;
}
select {
height: 40px;
}
textarea {
 resize: vertical;
}
input[type="submit"],
input[type="reset"] {
 background-color: #007bff; /* Blue button */
 color: white;
 padding: 10px 15px;
 border: none;
```

```
border-radius: 4px;
cursor: pointer;
margin-right: 10px;
}

input[type="submit"]:hover,
input[type="reset"]:hover {
  background-color: #0056b3; /* Darker blue on hover */
}

/* Optional: Style the button container for better alignment */
.button-container {
  display: flex;
  justify-content: center;
  width: 100%;
}
```



#### **Exercise 2.html**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Fetch API Example</title>
  <style>
    body {
       font-family: Arial, sans-serif;
       background-color: #08335c;
       display: flex;
       justify-content: center;
       align-items: center;
       height: 100vh;
       flex-direction: column;
     }
    .card {
       background: rgb(210, 212, 223);
       padding: 20px;
       border-radius: 10px;
       box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);
       margin: 10px;
       width: 300px;
       text-align: center;
     }
  </style>
</head>
<body>
```

```
<h2>Fetch API Data Display</h2>
  <div id="card-container"></div>
  <script>
    async function fetchData() {
       try {
         //const response = await fetch('https://jsonplaceholder.typicode.com/users');
         const response = await fetch('http://127.0.0.1:8081/users.json');
         const data = await response.json();
         const container = document.getElementById('card-container');
         container.innerHTML = "; // Clear previous content
         data.slice(0, 5).forEach(user => {
            const card = document.createElement('div');
            card.classList.add('card');
            card.innerHTML = `
              <h3>\{user.name\}</h3>
              <strong>Email:</strong> ${user.email}
              <strong>City:</strong> ${user.address.city}
            container.appendChild(card);
          });
       } catch (error) {
         console.error('Error fetching data:', error);
       }
     }
    fetchData(); // Call function to fetch and display data
</script>
</body>
</html>
```

## **Users.json:**

```
[
  "id": 1,
  "name": "Sunil Aldo S A",
  "username": "sunil007",
  "email": "sunilado2004@srmvec.ac.in",
  "address": {
   "street": "Kulas Light",
   "suite": "Apt. 556",
   "city": "Potheri",
   "zipcode": "627005",
   "geo": {
    "lat": "-37.3159",
    "lng": "81.1496"
    }
  },
  "phone": "91-80729 22340",
  "website": "cits.org",
  "company": {
   "name": "Creative-Crona",
   "catchPhrase": "Multi-layered client-server neural-net",
   "bs": "harness real-time e-markets"
  }
 },
  "id": 2,
  "name": "Sibi Karthick",
  "username": "Antonette",
  "email": "Shanna@melissa.tv",
```

```
"address": {
  "street": "Victor Plains",
  "suite": "Suite 879",
  "city": "Wisokyburgh",
  "zipcode": "90566-7771",
  "geo": {
   "lat": "-43.9509",
   "lng": "-34.4618"
  }
 },
 "phone": "010-692-6593 x09125",
"website": "anastasia.net",
 "company": {
  "name": "Deckow-Crist",
  "catchPhrase": "Proactive didactic contingency",
  "bs": "synergize scalable supply-chains"
 }
},
"id": 3,
"name": "Antro Jeffrie",
 "username": "Samantha",
"email": "Nathan@yesenia.net",
 "address": {
  "street": "Douglas Extension",
  "suite": "Suite 847",
  "city": "McKenziehaven",
  "zipcode": "59590-4157",
  "geo": {
   "lat": "-68.6102",
```

```
"lng": "-47.0653"
  }
 },
 "phone": "2-653-123-3337",
"website": "ramiro.info",
 "company": {
  "name": "Romaguera-Jacobson",
  "catchPhrase": "Face to face bifurcated interface",
  "bs": "e-enable strategic applications"
}
},
"id": 4,
"name": "Fathima",
"username": "Karianne",
"email": "Julianne.OConner@kory.org",
 "address": {
  "street": "Hoeger Mall",
  "suite": "Apt. 692",
  "city": "South Elvis",
  "zipcode": "53919-4257",
  "geo": {
   "lat": "29.4572",
   "lng": "-164.2990"
  }
 },
 "phone": "493-170-9623 x156",
 "website": "kale.biz",
"company": {
  "name": "Robel-Corkery",
```

```
"catchPhrase": "Multi-tiered zero tolerance productivity",
   "bs": "transition cutting-edge web services"
  }
 },
  "id": 5,
  "name": "Ragul Gandhi",
  "username": "Kamren",
  "email": "Lucio_Hettinger@annie.ca",
  "address": {
   "street": "Skiles Walks",
   "suite": "Suite 351",
   "city": "Roscoeview",
   "zipcode": "33263",
   "geo": {
     "lat": "-31.8129",
     "lng": "62.5342"
   }
  },
  "phone": "(254)954-1289",
  "website": "demarco.info",
  "company": {
   "name": "Keebler LLC",
   "catchPhrase": "User-centric fault-tolerant solution",
   "bs": "revolutionize end-to-end systems"
  }
},
  "id": 6,
  "name": "Mrs. Dennis Schulist",
```

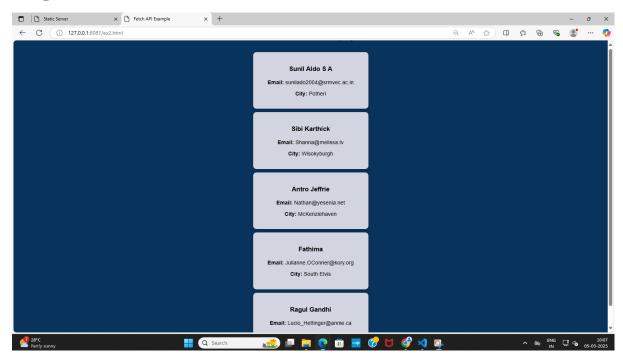
```
"username": "Leopoldo_Corkery",
 "email": "Karley_Dach@jasper.info",
 "address": {
  "street": "Norberto Crossing",
  "suite": "Apt. 950",
  "city": "South Christy",
  "zipcode": "23505-1337",
  "geo": {
   "lat": "-71.4197",
   "lng": "71.7478"
  }
 },
 "phone": "1-477-935-8478 x6430",
 "website": "ola.org",
 "company": {
  "name": "Considine-Lockman",
  "catchPhrase": "Synchronised bottom-line interface",
  "bs": "e-enable innovative applications"
 }
},
"id": 7,
"name": "Kurtis Weissnat",
"username": "Elwyn.Skiles",
 "email": "Telly.Hoeger@billy.biz",
 "address": {
  "street": "Rex Trail",
  "suite": "Suite 280",
  "city": "Howemouth",
  "zipcode": "58804-1099",
```

```
"geo": {
   "lat": "24.8918",
   "lng": "21.8984"
  }
 },
"phone": "210.067.6132",
"website": "elvis.io",
 "company": {
 "name": "Johns Group",
 "catchPhrase": "Configurable multimedia task-force",
 "bs": "generate enterprise e-tailers"
}
},
"id": 8,
"name": "Nicholas Runolfsdottir V",
"username": "Maxime_Nienow",
"email": "Sherwood@rosamond.me",
 "address": {
 "street": "Ellsworth Summit",
  "suite": "Suite 729",
  "city": "Aliyaview",
  "zipcode": "45169",
  "geo": {
   "lat": "-14.3990",
   "lng": "-120.7677"
  }
 },
 "phone": "586.493.6943 x140",
"website": "jacynthe.com",
```

```
"company": {
  "name": "Abernathy Group",
  "catchPhrase": "Implemented secondary concept",
  "bs": "e-enable extensible e-tailers"
}
},
"id": 9,
"name": "Glenna Reichert",
 "username": "Delphine",
 "email": "Chaim_McDermott@dana.io",
 "address": {
  "street": "Dayna Park",
  "suite": "Suite 449",
  "city": "Bartholomebury",
 "zipcode": "76495-3109",
  "geo": {
   "lat": "24.6463",
   "lng": "-168.8889"
  }
 },
 "phone": "(775)976-6794 x41206",
 "website": "conrad.com",
 "company": {
  "name": "Yost and Sons",
  "catchPhrase": "Switchable contextually-based project",
 "bs": "aggregate real-time technologies"
}
},
```

```
"id": 10,
"name": "Clementina DuBuque",
"username": "Moriah.Stanton",
"email": "Rey.Padberg@karina.biz",
"address": {
 "street": "Kattie Turnpike",
 "suite": "Suite 198",
 "city": "Lebsackbury",
 "zipcode": "31428-2261",
 "geo": {
  "lat": "-38.2386",
  "lng": "57.2232"
 }
},
"phone": "024-648-3804",
"website": "ambrose.net",
"company": {
 "name": "Hoeger LLC",
 "catchPhrase": "Centralized empowering task-force",
 "bs": "target end-to-end models"
}
```

]



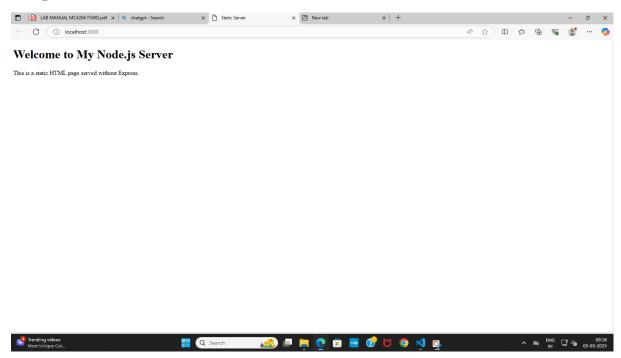
#### **Exercise 3.html**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Static Server</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <h1>Welcome to My Node.js Server</h1>
  This is a static HTML page served without Express.
</body>
</html>
Ex_3_server.js
const http = require('http');
const fs = require('fs');
const path = require('path');
const PORT = 3000;
const PUBLIC_DIR = path.join(__dirname, 'public');
// MIME types for various file extensions
const mimeTypes = {
  '.html': 'text/html',
  '.css': 'text/css',
  '.js': 'text/javascript',
  '.json': 'application/json',
```

```
'.jpg': 'image/jpeg',
  '.jpeg': 'image/jpeg',
  '.png': 'image/png',
  '.gif': 'image/gif',
  '.svg': 'image/svg+xml',
  '.ico': 'image/x-icon',
  '.woff': 'font/woff',
  '.woff2': 'font/woff2',
  '.ttf': 'font/ttf',
  '.eot': 'application/vnd.ms-fontobject',
};
const server = http.createServer((req, res) => {
  let filePath = path.join(PUBLIC_DIR, req.url === '/' ? 'ex_3.html' : req.url);
  // Get file extension
  let extname = path.extname(filePath).toLowerCase();
  // Default to text/html if file extension not found
  let contentType = mimeTypes[extname] || 'text/html';
  // Read and serve the file
  fs.readFile(filePath, (err, content) => {
     if (err) {
       if (err.code === 'ENOENT') {
          res.writeHead(404, { 'Content-Type': 'text/html' });
          res.end('<h1>404 - Not Found</h1>');
        } else {
          res.writeHead(500);
          res.end(`<h1>500 - Server Error</h1>${err.code}`);
```

```
}
     } else {
       res.writeHead(200, { 'Content-Type': contentType });
       res.end(content, 'utf-8');
     }
  });
});
server.listen(PORT, () => {
  console.log(`Server running at http://localhost:${PORT}`);
});
Server.js
const http = require('http');
const fs = require('fs');
const path = require('path');
const PORT = 3000;
const PUBLIC_DIR = path.join(__dirname, 'public');
const server = http.createServer((req, res) => {
  let filePath = path.join(PUBLIC_DIR, req.url === '/' ? 'ex_3.html' : req.url);
  // Get file extension
  let extname = path.extname(filePath);
  // Set content type
  let contentType = 'text/html';
  if (extname === '.css') contentType = 'text/css';
  if (extname === '.js') contentType = 'text/javascript';
```

```
// Read and serve the file
  fs.readFile(filePath, (err, content) => {
     if (err) {
       if (err.code === 'ENOENT') {
          res.writeHead(404, { 'Content-Type': 'text/html' });
         res.end('<h1>404 - Not Found</h1>');
       } else {
          res.writeHead(500);
         res.end(`Server Error: ${err.code}`);
       }
     } else {
       res.writeHead(200, { 'Content-Type': contentType });
       res.end(content, 'utf-8');
     }
  });
});
server.listen(PORT, () => {
  console.log(`Server running at http://localhost:${PORT}`);
});
```



## Exercise4.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form Submission</title>
</head>
<body>
  <h2>Submit Your Details</h2>
  <form action="/submit" method="post">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" required><br><br>
    <label for="email">Email:</label>
    <input type="email" id="email" name="email" required><br><br>
    <input type="submit" value="Submit">
  </form>
</body>
</html>
Ex_4_Server.js
const express = require('express');
const bodyParser = require('body-parser');
const fs = require('fs');
const app = express();
const PORT = 3000;
```

```
// Middleware to parse form data
app.use(bodyParser.urlencoded({ extended: true }));
app.use(bodyParser.json());
// Serve the HTML form (optional)
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});
// Handle form submission
app.post('/submit', (req, res) => {
  const formData = req.body;
  // Read existing data
  let existingData = [];
  if (fs.existsSync('data.json')) {
     const fileContent = fs.readFileSync('data.json');
     existingData = JSON.parse(fileContent);
   }
  // Add new data
  existingData.push(formData);
  // Save to JSON file
  fs.writeFileSync('data.json', JSON.stringify(existingData, null, 2));
  res.send('Form data saved successfully!');
});
```

```
// Start the server
app.listen(PORT, () => {
    console.log(`Server running at http://localhost:${PORT}`);
});

Data.json
[
    {
        "name": "Hulk",
        "email": "Hulk@gmail.com"
    },
    {
        "name": "Hulk",
        "email": "Hulk@gmail.com"
}
```

]



#### **Exercise 5.html**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Customer CRUD App</title>
      link rel="stylesheet" href="ex_5_style.css"> <!-- Link the CSS file -->
</head>
<body>
  <h2>Customer Management System</h2>
  <form id="customerForm">
    <input type="text" id="name" placeholder="Enter Name" required>
    <input type="text" id="city" placeholder="Enter City" required>
    <input type="text" id="mobile" placeholder="Enter Mobile No" required>
    <button type="submit">Add Customer</button>
  </form>
  <thead>
      Name
        City
        Mobile No
        Actions
```

```
</thead>
    <script>
    const API_URL = 'http://localhost:5000/customers';
    async function fetchCustomers() {
      const res = await fetch(API_URL);
      const customers = await res.json();
      document.getElementById('customersList').innerHTML = customers.map(customer
=>`
        <input type="text" value="${customer.name}" id="name-
${customer._id}">
          <input type="text" value="${customer.city}" id="city-
${customer._id}">
          <input type="text" value="${customer.mobile}" id="mobile-
${customer._id}">
          <button onclick="updateCustomer('${customer._id}')">Update</button>
            <button onclick="deleteCustomer('${customer._id}')">Delete</button>
          `).join(");
    }
    async function addCustomer(event) {
      event.preventDefault();
      const name = document.getElementById('name').value;
      const city = document.getElementById('city').value;
      const mobile = document.getElementById('mobile').value;
```

```
await fetch(API_URL, {
    method: 'POST',
    headers: { 'Content-Type': 'application/json' },
    body: JSON.stringify({ name, city, mobile })
  });
  document.getElementById('customerForm').reset();
  fetchCustomers();
}
async function updateCustomer(id) {
  const name = document.getElementById(`name-${id}`).value;
  const city = document.getElementById(`city-${id}`).value;
  const mobile = document.getElementById(`mobile-${id}`).value;
  await fetch(`${API_URL}/${id}`, {
    method: 'PUT',
    headers: { 'Content-Type': 'application/json' },
    body: JSON.stringify({ name, city, mobile })
  });
  fetchCustomers();
}
async function deleteCustomer(id) {
  await fetch(`${API_URL}/${id}`, { method: 'DELETE' });
  fetchCustomers();
}
```

```
document.getElementById('customerForm'). addEventListener('submit', \ addCustomer);\\
     fetchCustomers();
  </script>
</body>
</html>
Exercise5 style.css
/* General Page Styling */
body {
  font-family: Arial, sans-serif;
  text-align: center;
  background-color: #f4f4f4;
  margin: 0;
  padding: 0;
}
/* Form Styling */
form {
  margin: 20px auto;
  width: 50%;
  padding: 15px;
  background: white;
  border-radius: 8px;
  box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.1);
}
input {
  padding: 10px;
  margin: 5px;
```

```
width: 80%;
  border: 1px solid #ccc;
  border-radius: 5px;
}
/* Table Styling */
table {
  width: 60%;
  margin: 20px auto;
  border-collapse: collapse;
  background: white;
  box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.1);
}
th, td {
  padding: 10px;
  border: 1px solid #ddd;
  text-align: center;
}
th {
  background-color: #007bff;
  color: white;
}
/* Button Styling */
button {
  padding: 8px 12px;
  border: none;
  cursor: pointer;
```

```
color: white;
  border-radius: 5px;
}
button:hover {
  opacity: 0.8;
}
button:nth-child(1) { background-color: #28a745; } /* Update button - Green */
button:nth-child(2) { background-color: #dc3545; } /* Delete button - Red */
Ex_5_server.js
require('dotenv').config();
const express = require('express');
const mongoose = require('mongoose');
const cors = require('cors');
const app = express();
app.use(express.json());
app.use(cors());
const MONGO_URI = process.env.MONGO_URI;
if (!MONGO_URI) {
  console.error("X MONGO_URI is not set in .env file");
  process.exit(1);
}
mongoose.connect(MONGO_URI, { useNewUrlParser: true, useUnifiedTopology: true })
  .then(() => console.log('♥ MongoDB Connected'))
  .catch(err => console.error(err));
```

```
// Customer Schema
const CustomerSchema = new mongoose.Schema({
  name: { type: String, required: true },
  city: { type: String, required: true },
  mobile: { type: String, required: true }
});
const Customer = mongoose.model('Customer', CustomerSchema);
// Create
app.post('/customers', async (req, res) => {
  try {
     const newCustomer = new Customer(req.body);
     await newCustomer.save();
    res.json(newCustomer);
  } catch (err) {
    res.status(500).json({ error: err.message });
  }
});
// Read
app.get('/customers', async (req, res) => {
  const customers = await Customer.find();
  res.json(customers);
});
// Update
app.put('/customers/:id', async (req, res) => {
  try {
     const updatedCustomer = await Customer.findByIdAndUpdate(req.params.id, req.body,
{ new: true });
```

```
res.json(updatedCustomer);
} catch (err) {
    res.status(500).json({ error: err.message });
}
});

// Delete
app.delete('/customers/:id', async (req, res) => {
    try {
        await Customer.findByIdAndDelete(req.params.id);
        res.json({ message: 'Customer deleted' });
    } catch (err) {
        res.status(500).json({ error: err.message });
    }
});

app.listen(5000, () => console.log(' Server running on port 5000'));
```

