#### **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>
  E-mail Address: <input type="text" size=65 name="EMail"> <br/>br>
  Password: <input type="text" size=65 name="Password"> <br/>br>
  Telephone: <input type="text" size=65 name="Telephone"> <br/>br>
```

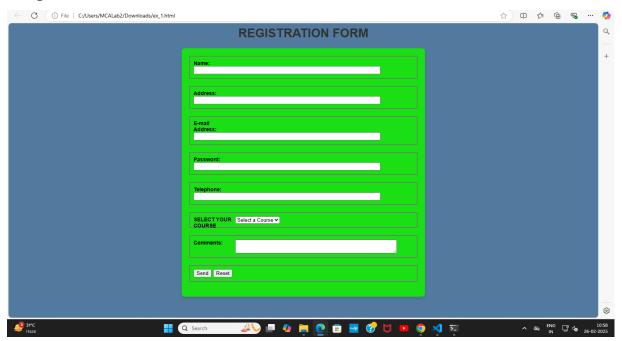
```
SELECT YOUR COURSE
    <select type="text" value="" name="Subject">
      <option>BTECH</option>
      <option>BBA</option>
      <option>BCA</option>
      <option>B.COM</option>
      <option>VALIDATEDETAIL
    </select><br>>
  Comments: <textarea cols="55" name="Comment"> </textarea>
  <input 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;
             pointer;
cursor:
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:
              align-items: center;
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);
                     width: 300px;
margin: 10px;
                                          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": "sibi",
 "username": "sibi007",
 "email": "sibi123@gmail.com",
 "address": {
  "street": "Kulas Light",
  "suite": "Apt. 556",
  "city": "chennai",
  "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": "sunil",
 "username": "Antonette",
 "email": "sunil123@gmail.com",
 "address": {
  "street": "Victor Plains",
```

```
"suite": "Suite 879",
  "city": "madurai",
  "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": "sarvesh",
 "username": "Samantha",
 "email": "sarva156@gmail.com",
 "address": {
  "street": "Douglas Extension",
  "suite": "Suite 847",
  "city": "coimbatore",
  "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": "fazad",
"username": "Karianne",
"email": "faina167*@gmail.com",
"address": {
 "street": "Hoeger Mall",
 "suite": "Apt. 692",
 "city": "hydrabad",
 "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"
]
```

### sibi

Email: sibi123@gmail.com

City: chennai

### sunil

Email: sunil123@gmail.com

City: madurai

## sarvesh

Email: sarva156@gmail.com

City: coimbatore

## fazad

Email: farina167\*@gmail.com

City: hyderabad

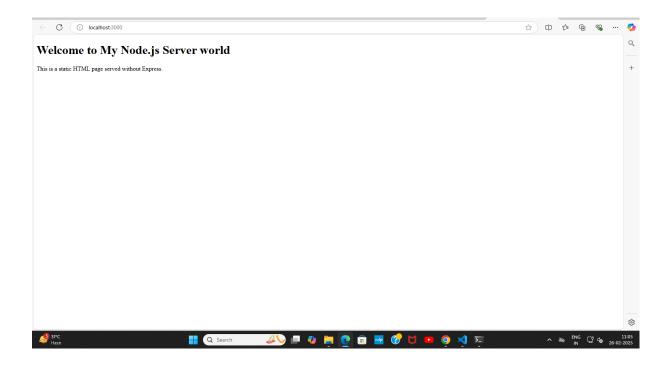
#### **Exercise 3.html**

```
<!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
contentType = 'text/html';
```

```
if (extname === '.css') contentType = 'text/css';
(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}`);
});
```



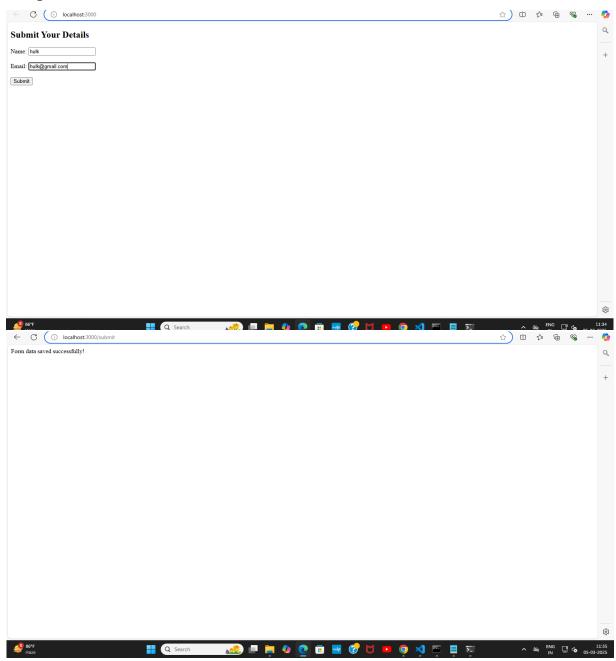
#### Exercise4.html

```
<!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
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
          border-
#ccc;
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'));
```

