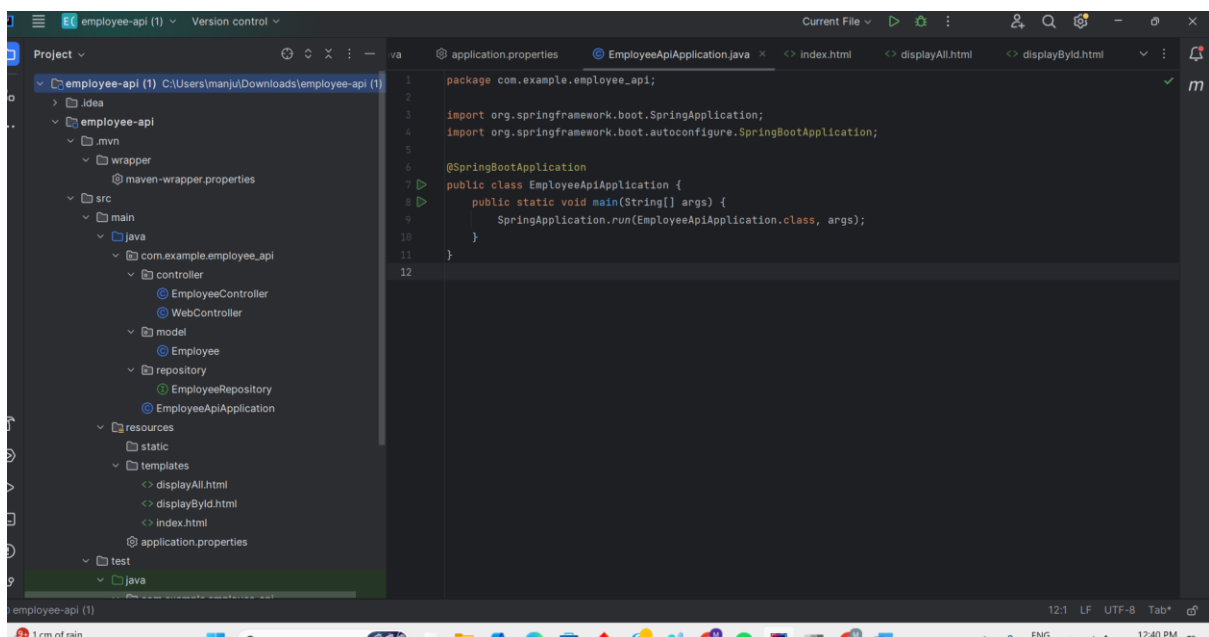
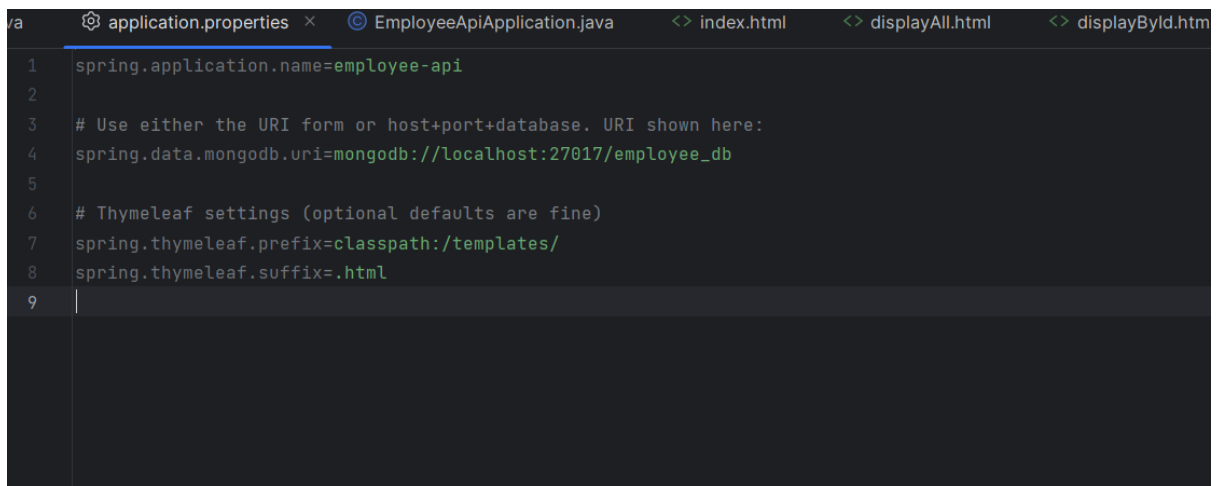
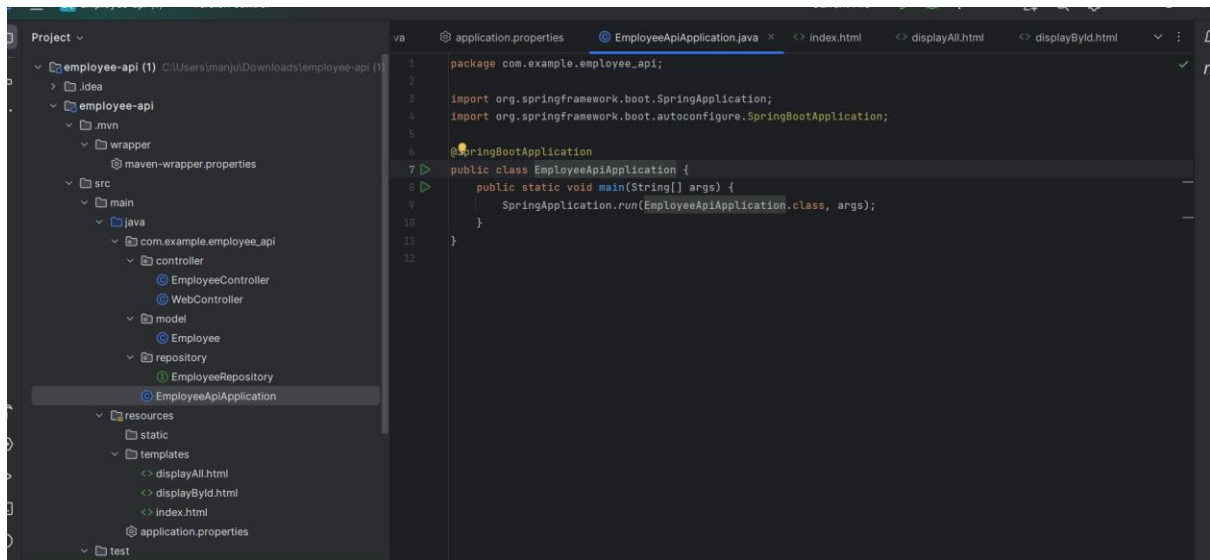


Spring Data Mongodb

1.Create a Restful API using spring mvc as per the requirements below:(should use mongodb)

1. The application should display a Form in the landing page (index.page) where the user can enter the 'Employee' details like 'Employee ID' , 'Employee Name' , 'Employee Email' and 'Location' and upon submission the data should be saved onto a database table
2. The application should also support a '/displayAll' path which shows the list of all the Employees.
3. The application should also support a '/display/<user id>' path where upon passing of userid as the parameter the details of only the particular Employee holding that Employee ID will be displayed.
4. Code all the above functionalities required as a RESTful URL.





```
application.properties EmployeeApiApplication.java index.html x displayAll.html displayById.html
1 <!DOCTYPE html>
2 <html xmlns:th="http://www.thymeleaf.org">
3 <head>
4 <meta charset="utf-8"/>
5 <title>Add Employee</title>
6 <style>
7     body {
8         font-family: Arial, sans-serif;
9         margin: 40px;
10        background-color: #f9f9f9;
11    }
12    h2 {
13        text-align: center;
14        color: #333;
15    }
16    form {
17        max-width: 400px;
18        margin: auto;
19        padding: 20px;
20        background: #fff;
21        border-radius: 8px;
22        box-shadow: 0 2px 6px rgba(0,0,0,0.2);
23    }
24    label {
25        display: block;
26        margin: 10px 0 5px;
27        font-weight: bold;
28    }
29    input {
```

```
application.properties EmployeeApiApplication.java index.html x displayAll.html displayById.html
52        margin-top: 20px;
53    }
54    .links a {
55        text-decoration: none;
56        color: #007bff;
57        font-size: 14px;
58    }
59 </style>
60 </head>
61 <body>
62 <h2>Add Employee</h2>
63
64 <form th:action="@{/employee/save}" th:object="${employee}" method="post">
65     <label>Employee ID:</label>
66     <input type="text" th:field="*{employeeId}" required/>
67
68     <label>Name:</label>
69     <input type="text" th:field="*{name}" required/>
70
71     <label>Email:</label>
72     <input type="email" th:field="*{email}" required/>
73
74     <label>Location:</label>
75     <input type="text" th:field="*{location}" required/>
76
77     <button type="submit">Submit</button>
78 </form>
79
80 <div class="links">
```

```
application.properties  EmployeeApiApplication.java  <> index.html  <> displayAll.html  <> displayById.html  ⚠ 13  ✔ 2  ^  v
1  <!DOCTYPE html>
2  <html xmlns:th="http://www.thymeleaf.org">
3  <head>
4      <meta charset="utf-8"/>
5      <title>All Employees</title>
6      <style>
7          body {
8              font-family: Arial, sans-serif;
9              margin: 40px;
10             background: #f4f4f9;
11         }
12         h2 {
13             text-align: center;
14             color: #333;
15         }
16         form {
17             text-align: center;
18             margin-bottom: 20px;
19         }
20         input {
21             padding: 6px;
22             font-size: 14px;
23             border: 1px solid #ccc;
24             border-radius: 4px;
25         }
26         button {
27             padding: 6px 12px;
28             font-size: 14px;
29             border: none;
```

```
application.properties EmployeeApiApplication.java index.html displayAll.html displayByld.html
31     background: #28a745;
32     color: white;
33     cursor: pointer;
34 }
35 button:hover {
36     background: #218838;
37 }
38 table {
39     width: 100%;
40     border-collapse: collapse;
41     margin-top: 15px;
42     background: white;
43 }
44 th, td {
45     border: 1px solid #ddd;
46     padding: 10px;
47     font-size: 14px;
48     text-align: center;
49 }
50 th {
51     background: #007bff;
52     color: white;
53 }
54 a {
55     text-decoration: none;
56     color: #007bff;
57 }
58 a:hover {
59     text-decoration: underline;
```

> <> displayAll.html 108:1 CRLF UTF-8 4 spaces

```
application.properties EmployeeApiApplication.java index.html displayAll.html displayByld.html
64     }
65 </style>
66 </head>
67 <body>
68 <h2>Employee List</h2>
69
70 <form th:action="@{/employee/display/search}" method="get">
71     <label>Search by Employee ID or Mongo ID:</label>
72     <input type="text" name="q" placeholder="Enter ID required"/>
73     <button type="submit">Search</button>
74 </form>
75
76 <table>
77     <thead>
78         <tr>
79             <th>Mongo _id</th>
80             <th>Employee ID</th>
81             <th>Name</th>
82             <th>Email</th>
83             <th>Location</th>
84             <th>Actions</th>
85         </tr>
86     </thead>
87     <tbody>
88         <tr th:each="emp : ${employees}">
89             <td th:text="${emp.id}"></td>
90             <td th:text="${emp.employeeId}"></td>
91             <td th:text="${emp.name}"></td>
92             <td th:text="${emp.email}"></td>
```

```
va application.properties EmployeeApiApplication.java index.html displayAll.html displayById.html x v :
1 <!DOCTYPE html>
2 <html xmlns:th="http://www.thymeleaf.org">
3 <head>
4     <meta charset="utf-8"/>
5     <title>Employee Details</title>
6     <style>
7         body {
8             font-family: Arial, sans-serif;
9             margin: 40px;
10            background: #f4f4f9;
11        }
12        h2 {
13            text-align: center;
14            color: #333;
15        }
16        .card {
17            max-width: 400px;
18            margin: auto;
19            padding: 20px;
20            background: white;
21            border-radius: 8px;
22            box-shadow: 0 2px 6px rgba(0,0,0,0.2);
23        }
24        p {
25            font-size: 15px;
26            margin: 8px 0;
27        }
28        strong {
29            color: #007bff;
```

```
va application.properties EmployeeApiApplication.java index.html displayAll.html displayById.html x v :
31        .error {
32            color: red;
33            font-weight: bold;
34            text-align: center;
35        }
36        .links {
37            text-align: center;
38            margin-top: 20px;
39        }
40        .links a {
41            margin: 0 10px;
42            text-decoration: none;
43            color: #007bff;
44        }
45        .links a:hover {
46            text-decoration: underline;
47        }
48    </style>
49 </head>
50 <body>
51 <h2>Employee Details</h2>
52
53 <div th:if="${employee != null}" class="card">
54     <p><strong>Mongo _id:</strong> <span th:text="${employee.id}"></span></p>
55     <p><strong>Employee ID:</strong> <span th:text="${employee.employeeId}"></span></p>
56     <p><strong>Name:</strong> <span th:text="${employee.name}"></span></p>
57     <p><strong>Email:</strong> <span th:text="${employee.email}"></span></p>
58     <p><strong>Location:</strong> <span th:text="${employee.location}"></span></p>
59 </div>
```

```

48     </style>
49 </head>
50 <body>
51 <h2>Employee Details</h2>
52
53 <div th:if="${employee != null}" class="card">
54     <p><strong>Mongo _id:</strong> <span th:text="${employee.id}"></span></p>
55     <p><strong>Employee ID:</strong> <span th:text="${employee.employeeId}"></span></p>
56     <p><strong>Name:</strong> <span th:text="${employee.name}"></span></p>
57     <p><strong>Email:</strong> <span th:text="${employee.email}"></span></p>
58     <p><strong>Location:</strong> <span th:text="${employee.location}"></span></p>
59 </div>
60
61 <div th:if="${employee == null}" class="error">
62     ✖ No employee found with that identifier.
63 </div>
64
65 <div class="links">
66     <a th:href="@{/employee/displayAll}">Back to All</a> |
67     <a th:href="@{/employee/}">Add New</a>
68 </div>
69 </body>
70 </html>
71 |

```

```
EmployeeRepository.java × EmployeeController.java WebController.java application.properties EmployeeApiA v
1 package com.example.employee_api.repository;
2
3 import com.example.employee_api.model.Employee;
4 import org.springframework.data.mongodb.repository.MongoRepository;
5
6 import java.util.Optional;
7
8 4 usages
9 public interface EmployeeRepository extends MongoRepository<Employee, String> {
10     2 usages
11     Optional<Employee> findByEmployeeId(String employeeId);
12 }
13
14
```

```
EmployeeRepository.java EmployeeController.java × WebController.java application.properties EmployeeApiA v m
1 package com.example.employee_api.controller;
2
3 import com.example.employee_api.model.Employee;
4 import com.example.employee_api.repository.EmployeeRepository;
5 import org.springframework.beans.factory.annotation.Autowired;
6 import org.springframework.web.bind.annotation.*;
7
8 import java.util.List;
9 import java.util.Optional;
10
11 no usages
12 @RestController
13 @RequestMapping("/api/employee")
14 public class EmployeeController {
15     5 usages
16     @Autowired
17     private EmployeeRepository repo;
18
19     no usages
20     @PostMapping("/add")
21     public Employee addEmployee(@RequestBody Employee emp) {
22         return repo.save(emp);
23     }
24
25     no usages
26     @GetMapping("/all")
27     public List<Employee> all() {
28         return repo.findAll();
29     }
30 }
31
```



```
EmployeeRepository.java EmployeeController.java WebController.java application.properties EmployeeApiA
14 5 usages
15 @Autowired
16 private EmployeeRepository repo;
17
18 no usages
19 @PostMapping("/add")
20 public Employee addEmployee(@RequestBody Employee emp) {
21     return repo.save(emp);
22 }
23
24 no usages
25 @GetMapping("/all")
26 public List<Employee> all() {
27     return repo.findAll();
28 }
29
30 no usages
31 @GetMapping("/{id}")
32 public Optional<Employee> findById(@PathVariable String id) {
33     return repo.findById(id);
34 }
35
36 no usages
37 @GetMapping("/byEmployeeId/{employeeId}")
38 public Optional<Employee> byEmployeeId(@PathVariable String employeeId) {
39     return repo.findByEmployeeId(employeeId);
40 }
41 }
```

```
EmployeeRepository.java EmployeeController.java WebController.java application.properties EmployeeApiA
1 package com.example.employee_api.controller;
2
3 import com.example.employee_api.model.Employee;
4 import com.example.employee_api.repository.EmployeeRepository;
5 import org.springframework.beans.factory.annotation.Autowired;
6 import org.springframework.stereotype.Controller;
7 import org.springframework.ui.Model;
8 import org.springframework.web.bind.annotation.*;
9
10 no usages
11 @Controller
12 @RequestMapping("/employee")
13 public class WebController {
14
15     6 usages
16     @Autowired
17     private EmployeeRepository employeeRepository;
18
19     // Show form (index page)
20     no usages
21     @GetMapping("/")
22     @ @ public String index(Model model) {
23         model.addAttribute("employee", new Employee());
24         return "index"; // index.html
25     }
26
27     // Save employee, then redirect (Post/Redirect/Get pattern)
28     no usages
29     @PostMapping("/save")
30     public String saveEmployee(@ModelAttribute Employee employee) {
31
32     }
```

```
EmployeeRepository.java EmployeeController.java WebController.java x application.properties EmployeeApiA m
27     employeeRepository.save(employee);
28     return "redirect:/employee/displayAll";
29 }
30
31 // Show all employees
32 no usages
33 @GetMapping("/displayAll")
34 public String displayAll(Model model) {
35     model.addAttribute("employees", employeeRepository.findAll());
36     return "displayAll"; // displayAll.html
37 }
38
39 // Show details for an identifier (first try Mongo _id, then employeeId)
40 no usages
41 @GetMapping("/display/{identifier}")
42 public String displayByIdentifier(@PathVariable String identifier, Model model) {
43     Employee emp = employeeRepository.findById(identifier).orElse(null);
44     if (emp == null) {
45         emp = employeeRepository.findById(identifier).orElse(null);
46     }
47     model.addAttribute("employee", emp);
48     return "displayById"; // matches your template name
49 }
50
51 // Search helper (form redirects here)
52 no usages
53 @GetMapping("/display/search")
54 public String searchRedirect(@RequestParam("q") String q) {
55     return "redirect:/employee/display/" + q;
56 }
57
58 }
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```
Employee.java x EmployeeRepository.java EmployeeController.java WebController.java application.properties m
1 package com.example.employee_api.model;
2
3 import org.springframework.data.annotation.Id;
4 import org.springframework.data.mongodb.core.mapping.Document;
5
6 13 usages
7 @Document(collection = "employee")
8 public class Employee {
9
10     2 usages
11     @Id
12     private String id; // MongoDB _id (auto-generated if not set)
13
14     3 usages
15     private String employeeId; // Custom employee ID (entered on form)
16
17     3 usages
18     private String name;
19
20     3 usages
21     private String email;
22
23     3 usages
24     private String location;
25
26     // Constructors
27     11 usages
28     public Employee() {}
29
30     10 usages
31     public Employee(String employeeId, String name, String email, String location) {
32         this.employeeId = employeeId;
33     }
34 }
```

```
Employee.java x EmployeeRepository.java EmployeeController.java WebController.java application.properties m
20 public Employee(String employeeId, String name, String email, String location) {
21     this.employeeId = employeeId;
22     this.name = name;
23     this.email = email;
24     this.location = location;
25 }
26
27 // Getters & setters
28 no usages
29 public String getId() { return id; }
30 no usages
31 public void setId(String id) { this.id = id; }
32
33 no usages
34 public String getEmployeeId() { return employeeId; }
35 no usages
36 public void setEmployeeId(String employeeId) { this.employeeId = employeeId; }
37
38 public String getName() { return name; }
39 public void setName(String name) { this.name = name; }
40
41 no usages
42 public String getEmail() { return email; }
43 no usages
44 public void setEmail(String email) { this.email = email; }
45
46 no usages
47 public String getLocation() { return location; }
48 no usages
49 public void setLocation(String location) { this.location = location; }
50 }
```

le > employee_api > model > Employee 7:14 CRLF UTF-8 4 spaces

```
Employee.java pom.xml (employee-api) EmployeeRepository.java EmployeeController.java WebController.java
1 <?xml version="1.0" encoding="UTF-8"?>
2 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
3     xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
4     <modelVersion>4.0.0</modelVersion>
5     <parent>
6         <groupId>org.springframework.boot</groupId>
7         <artifactId>spring-boot-starter-parent</artifactId>
8         <version>3.5.5</version>
9         <relativePath/> <!-- lookup parent from repository -->
10    </parent>
11    <groupId>com.example</groupId>
12    <artifactId>employee-api</artifactId>
13    <version>0.0.1-SNAPSHOT</version>
14    <name>employee-api</name>
15    <description>Demo project for Spring Boot</description>
16    <url/>
17    <licenses>
18        <license/>
19    </licenses>
20    <developers>
21        <developer/>
22    </developers>
23    <scm>
24        <connection/>
25        <developerConnection/>
26        <tag/>
27        <url/>
28    </scm>
29    <properties>
```

```
Employee.java pom.xml (employee-api) EmployeeRepository.java EmployeeController.java WebController.java
28 </scm>
29 <properties>
30     <java.version>17</java.version>
31 </properties>
32 <dependencies>
33     <dependency>
34         <groupId>org.springframework.boot</groupId>
35         <artifactId>spring-boot-starter-data-mongodb</artifactId>
36     </dependency>
37     <dependency>
38         <groupId>org.springframework.boot</groupId>
39         <artifactId>spring-boot-starter-thymeleaf</artifactId>
40     </dependency>
41     <dependency>
42         <groupId>org.springframework.boot</groupId>
43         <artifactId>spring-boot-starter-web</artifactId>
44     </dependency>
45
46     <dependency>
47         <groupId>org.springframework.boot</groupId>
48         <artifactId>spring-boot-starter-test</artifactId>
49         <scope>test</scope>
50     </dependency>
51 </dependencies>
52
53 <build>
54     <plugins>
55         <plugin>
56             <groupId>org.springframework.boot</groupId>
```

```
Employee.java pom.xml (employee-api) EmployeeRepository.java EmployeeController.java WebController.java
40 </dependency>
41 <dependency>
42 <groupId>org.springframework.boot</groupId>
43 <artifactId>spring-boot-starter-web</artifactId>
44 </dependency>
45
46 <dependency>
47 <groupId>org.springframework.boot</groupId>
48 <artifactId>spring-boot-starter-test</artifactId>
49 <scope>test</scope>
50 </dependency>
51 </dependencies>
52
53 <build>
54 <plugins>
55 <plugin>
56 <groupId>org.springframework.boot</groupId>
57 <artifactId>spring-boot-maven-plugin</artifactId>
58 </plugin>
59 </plugins>
60 </build>
61
62 </project>
63
```

```
EmployeeApiApplicationTests.java WebController.java index.html displayAll.html displayById.html
1 package com.example.employee_api;
2
3 import
4
5
6 @SpringBootTest
7 class EmployeeApiApplicationTests {
8
9     @Test
10     void contextLoads() {
11
12     }
13
14 }
```

Run EmployeeApiApplicationTests x

✓ EmployeeApiApplicationTests (com.example.employee_api) 1 sec 390 ms

✓ contextLoads() 1 sec 390 ms

✓ Tests passed: 1 of 1 test - 1 sec 390 ms

C:\Program Files\Java\jdk-17.0.12\bin\java.exe ...

12:49:31.531 [main] INFO org.springframework.test.context.

12:49:31.779 [main] INFO org.springframework.boot.test.con

.. Spring Boot .. (v3.5.5)

2025-09-08T12:49:32.863+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:32.866+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:34.118+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:34.222+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:35.321+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:35.347+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:36.244+05:30 INFO 22976 --- [employee-ar

2025-09-08T12:49:37.061+05:30 INFO 22976 --- [employee-ar

Creating the employee-db in mongodb

```
Microsoft Windows [Version 10.0.26100.4946]
(c) Microsoft Corporation. All rights reserved.

C:\Users\manju>mongosh
Current Mongosh Log ID: 68be729f9e561f96abeec4a8
Connecting to:      mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.5.6
Using MongoDB:      8.0.12
Using Mongosh:       2.5.6
mongosh 2.5.7 is available for download: https://www.mongodb.com/try/download/shell

For mongosh info see: https://www.mongodb.com/docs/mongosh-shell/

-----
  The server generated these startup warnings when booting
  2025-09-07T20:11:20.776+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

test> use employee_db
... db.createCollection("employee")
...
switched to db employee_db
employee_db>
```

Output:

localhost:8080/employee/

Add Employee

Employee ID:

Name:

Email:

Location:

[View All Employees](#)

displayAll the employee

localhost:8080/employee/displayAll

Employee List

Search by Employee ID or Mongo ID:

Mongo_id	Employee ID	Name	Email	Location	Actions
68be77fc03064c979452a133	1	john	john@gmail.com	chennai	View Delete
68be7b92a421abbf5dd10a56	2	jack	jack@gmail.com	chennai	View Delete
68be804ca8929448b29637eb	3	sam	sam@gmail.com	mumbai	View Delete
68be80f6a8929448b29637ed	4	ella	ella@gmail.com	mumbai	View Delete

[Add New Employee](#)

displayById:

Employee List

Search by Employee ID or Mongo ID: Search

← → ↻ localhost:8080/employee/display/4 ☆ ⓘ ⋮

Employee Details

Mongo _id: 68be80f6a8929448b29637ed

Employee ID: 4

Name: ella

Email: ella@gmail.com

Location: mumbai

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