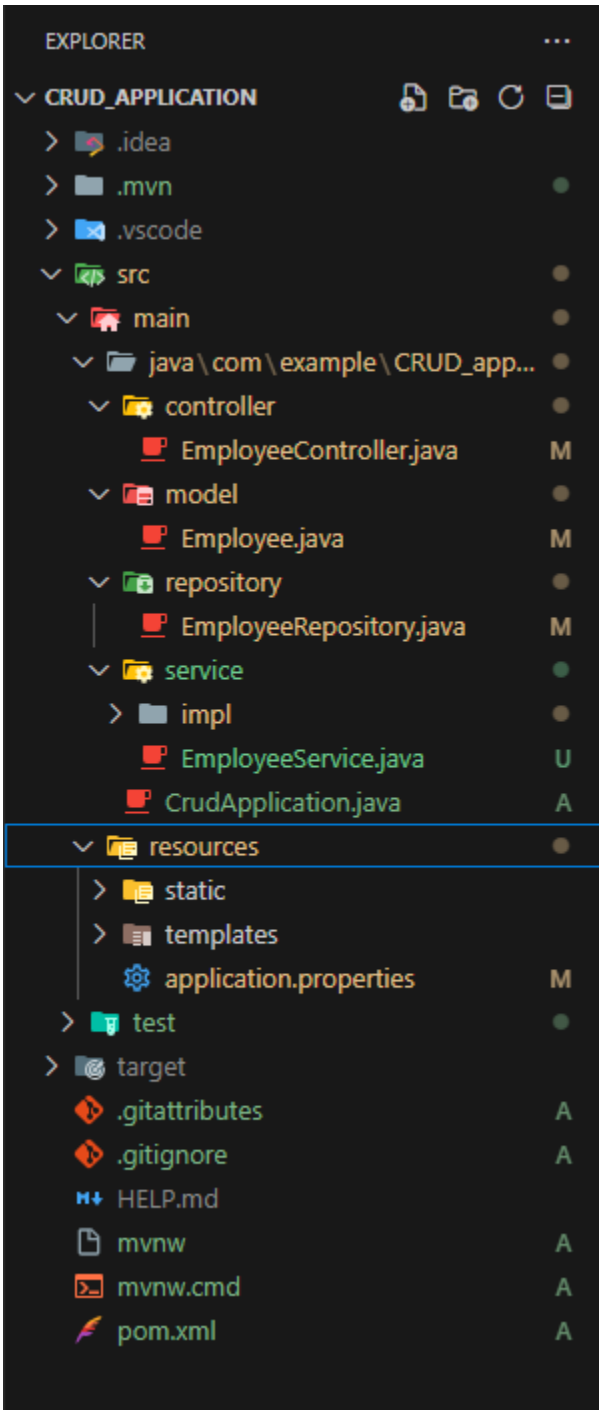
Folder Structure



Employee.java

```java
package com.example.CRUD_application.model;

import jakarta.persistence.Column;
import jakarta.persistence.Entity;
import jakarta.persistence.GeneratedValue;
import jakarta.persistence.GenerationType;
import jakarta.persistence.Id;
import jakarta.persistence.Table;
import lombok.AllArgsConstructor;
import lombok.Data;
import lombok.NoArgsConstructor;

@Entity //specifies that the class is an entity and is mapped to a database table
@AllArgsConstructor //generates a constructor with 1 parameter for each field in your class
@NoArgsConstructor //generates a no-argument constructor
@Data //generates getters and setters for all fields
@Table(name = "employees")
public class Employee {
    @Id //primary key
    @GeneratedValue(strategy = GenerationType.IDENTITY) //auto-increment
    private Long id;
    @Column(name = "first_name", nullable = false) //column name in the database
    private String firstName;
    @Column(name = "last_name", nullable = false) //column name in the database
    private String lastName;
    @Column(name = "email", nullable = false, unique = true) //column name in the database
    private String email;

}
```

EmployeeRepository.java

```java
package com.example.CRUD_application.repository;

import org.springframework.data.jpa.repository.JpaRepository;

import com.example.CRUD_application.model.Employee;

public interface EmployeeRepository extends JpaRepository<Employee,
Long> {


    // crud methods are provided by JpaRepository
}
```

EmployeeService.java

```java
package com.example.CRUD_application.service;
import java.util.List;
import com.example.CRUD_application.model.Employee;

public interface EmployeeService {
    Employee saveEmployee (Employee employee); // create
    List<Employee> getAllEmployees(); // read all
    Employee getEmployeeById(Long id); // read by id
    Employee updateEmployee(Employee employee, Long id); // update
    void deleteEmployee(Long id); // delete
}
```

EmployeeServiceImpl.java

```
package com.example.CRUD_application.service.impl;
import java.util.List;
import java.util.Optional;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

import com.example.CRUD_application.model.Employee;
import com.example.CRUD_application.repository.EmployeeRepository;
import com.example.CRUD_application.service.EmployeeService;

@Service
public class EmployeeServiceImpl implements EmployeeService {

   @Autowired
   private EmployeeRepository employeeRepository;

    @Override
    public Employee saveEmployee(Employee employee) {
        return employeeRepository.save(employee);
    }

    @Override
    public List<Employee> getAllEmployees() {
        return employeeRepository.findAll();
    }

    @Override
    public Employee getEmployeeById(Long id) {
        Optional<Employee> employee = employeeRepository.findById(id);
        if(employee.isPresent()) {
            return employee.get();
        } else {
            throw new RuntimeException("Employee not found with id: "
+ id);
        }
    }
```

```
    @Override
    public Employee updateEmployee(Employee employee, Long id) {
        Employee exitingEmployee =
employeeRepository.findById(id).orElseThrow(
            () -> new RuntimeException("Employee not found with id: "
+ id)
        );
        exitingEmployee.setFirstName(employee.getFirstName());
        exitingEmployee.setLastName(employee.getLastName());
        exitingEmployee.setEmail(employee.getEmail());
        employeeRepository.save(exitingEmployee);
        return exitingEmployee;

    }


    @Override
    public void deleteEmployee(Long id) {
        employeeRepository.findById(id).orElseThrow(
            () -> new RuntimeException("Employee not found with id: "
+ id)
        );
        employeeRepository.deleteById(id);
    }
}
```

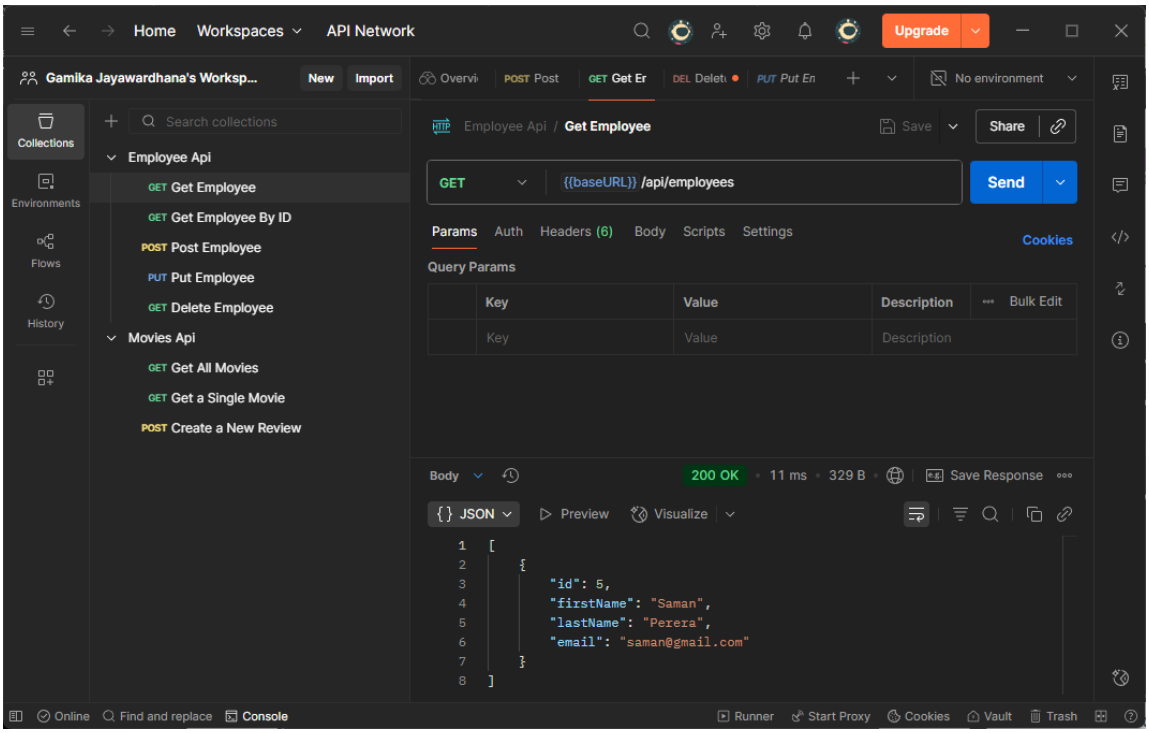
EmployeeController.java

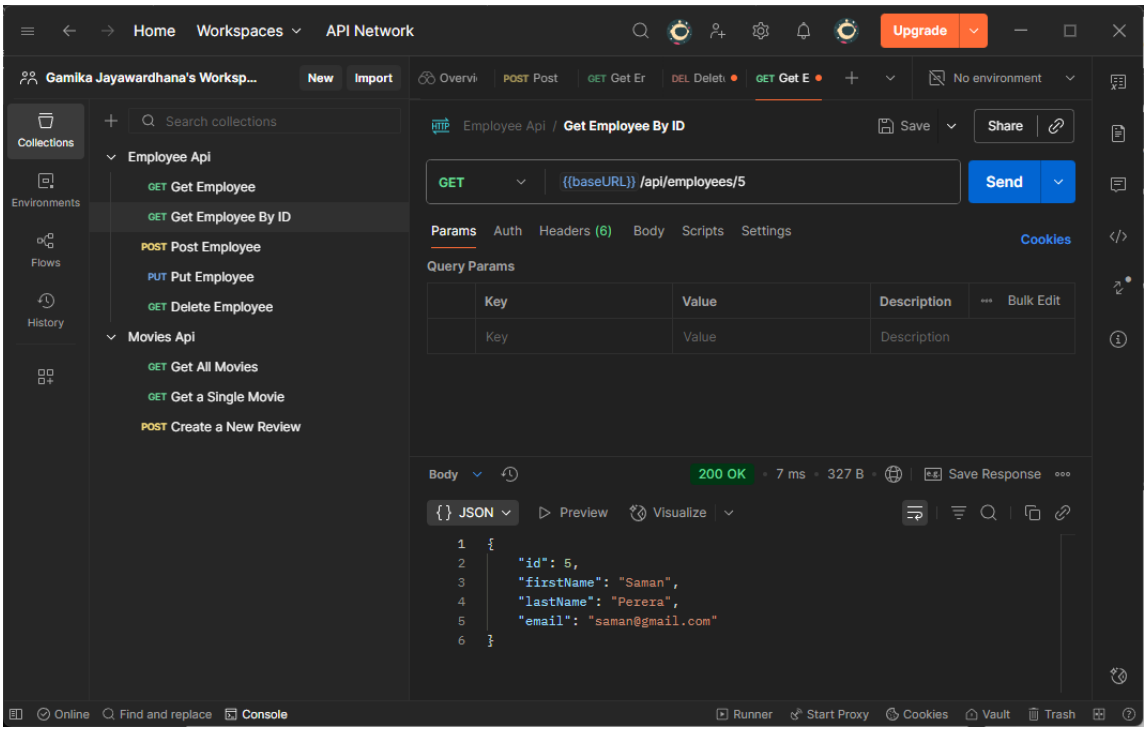
```
package com.example.CRUD_application.controller;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
```

```
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.CrossOrigin;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;

import com.example.CRUD_application.model.Employee;
import com.example.CRUD_application.service.EmployeeService;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.PutMapping;



@RestController
@RequestMapping("/api/employees")
@CrossOrigin(origins = "*")
public class EmployeeController {

    @Autowired
    private EmployeeService employeeService;

    @PostMapping
    public ResponseEntity<Employee> saveEmployee(@RequestBody Employee
employee) {
        return new
ResponseEntity<Employee>(employeeService.saveEmployee(employee),
HttpStatus.CREATED);
    }

    @GetMapping
    public List<Employee> getAllEmployees() {
        return employeeService.getAllEmployees();
    }
```

```
    @GetMapping("{id}")
    public ResponseEntity<Employee>
getEmployeeById(@PathVariable("id") Long employeeID) {
    return new
ResponseEntity<Employee>(employeeService.getEmployeeById(employeeID),
HttpStatus.OK);
    }

    @PutMapping("{id}")
    public ResponseEntity<Employee> updateEmployee(@PathVariable("id")
Long id, @RequestBody Employee employee) {
        return new
ResponseEntity<Employee>(employeeService.updateEmployee(employee, id),
HttpStatus.OK);
    }

    @DeleteMapping("{id}")
    public ResponseEntity<String> deleteEmployee(@PathVariable("id")
Long id) {
        employeeService.deleteEmployee(id);
        return new ResponseEntity<String>("Employee deleted
successfully!.", HttpStatus.OK);
    }
}
```

Postman


Home
Workspaces
API Network
Upgrade
Gamika Jayawardhana's Worksp...
New
Import
No environment
Collections
Environments
Flows
History
Search collections
Employee Api
GET Get Employee
GET Get Employee By ID
POST Post Employee
PUT Put Employee
GET Delete Employee
Movies Api
GET Get All Movies
GET Get a Single Movie
POST Create a New Review
Employee Api / Get Employee
Save
Share
GET
{{baseURL}} /api/employees
Send
Params
Auth
Headers (6)
Body
Scripts
Settings
Cookies
Query Params
Key
Value
Description
Bulk Edit
Body
200 OK
11 ms
329 B
Save Response
{} JSON
Preview
Visualize
[
{
"id": 5,
"firstName": "Saman",
"lastName": "Perera",
"email": "saman@gmail.com"
}
]
Online
Find and replace
Console
Runner
Start Proxy
Cookies
Vault
Trash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GET Get Employee By ID
POST Post Employee
PUT Put Employee
GET Delete Employee
Movies Api
GET Get All Movies
GET Get a Single Movie
POST Create a New Review
Employee Api / Get Employee By ID
Save
Share
GET
{{baseURL}} /api/employees/5
Send
Params
Auth
Headers (6)
Body
Scripts
Settings
Cookies
Query Params
Key
Value
Description
Bulk Edit
Body
200 OK
7 ms
327 B
Save Response
{} JSON
Preview
Visualize
{
"id": 5,
"firstName": "Saman",
"lastName": "Perera",
"email": "saman@gmail.com"
}
Online
Find and replace
Console
Runner
Start Proxy
Cookies
Vault
Trash

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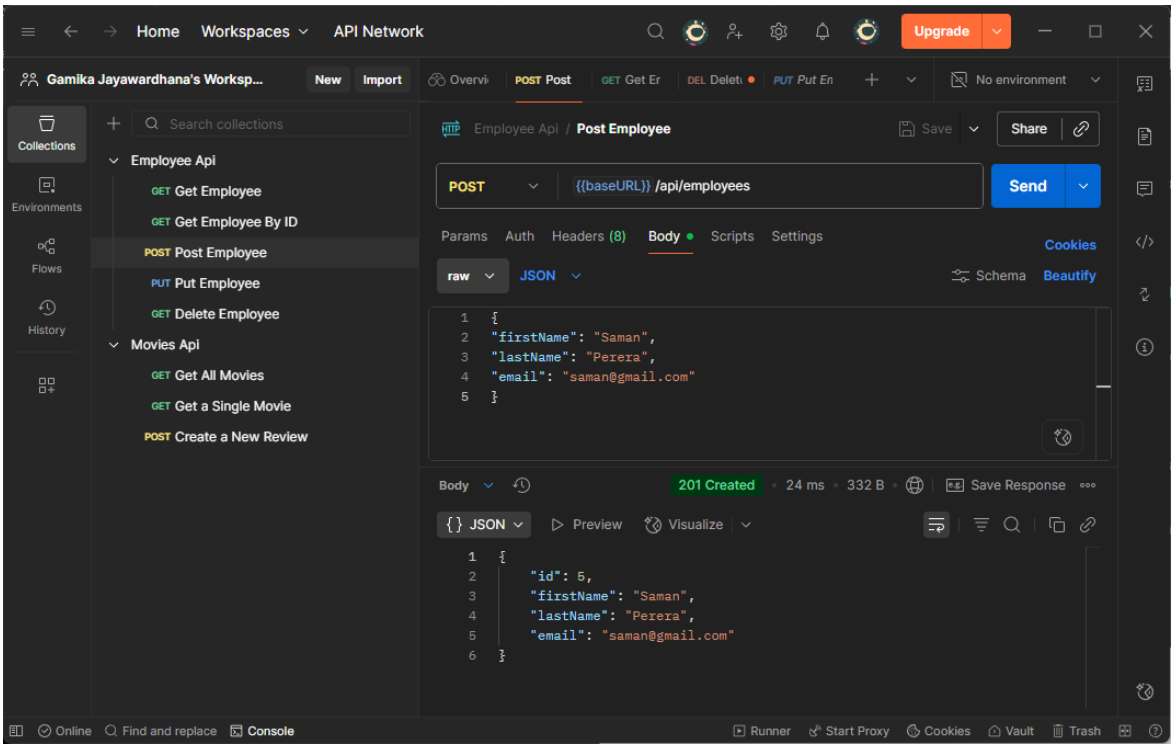

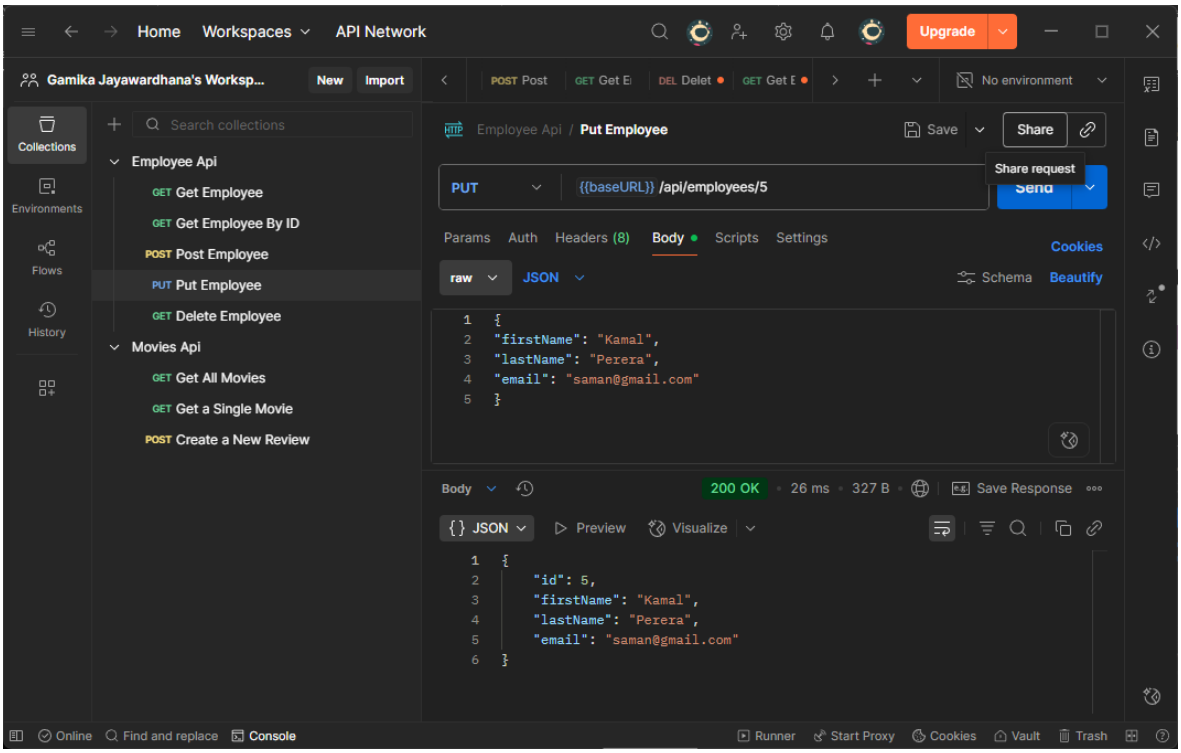

Tutorial 02

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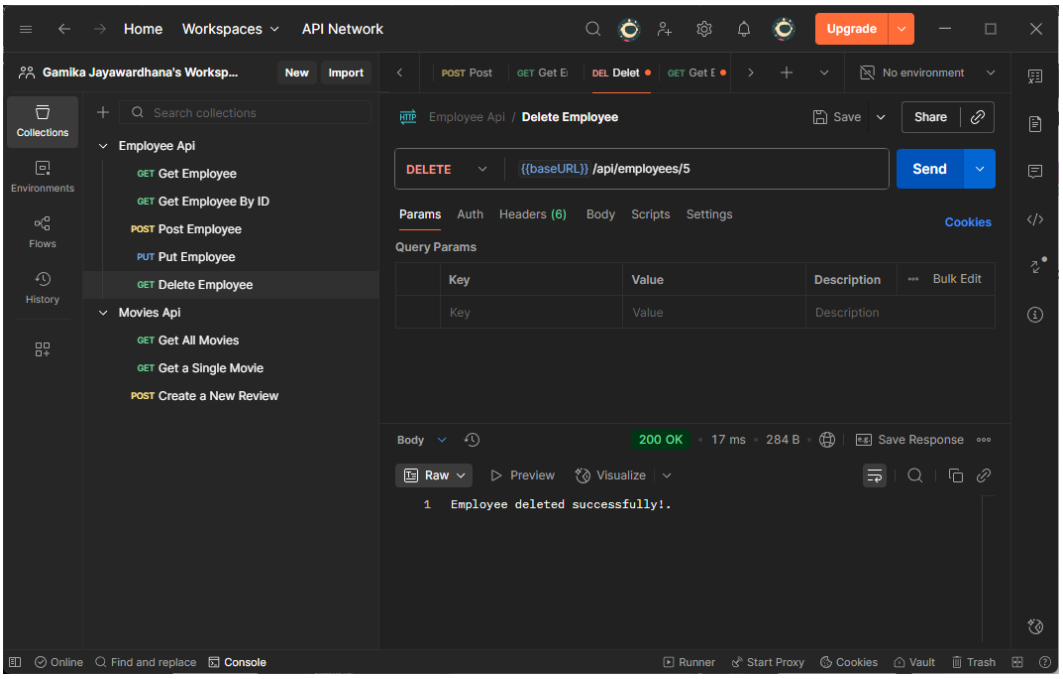
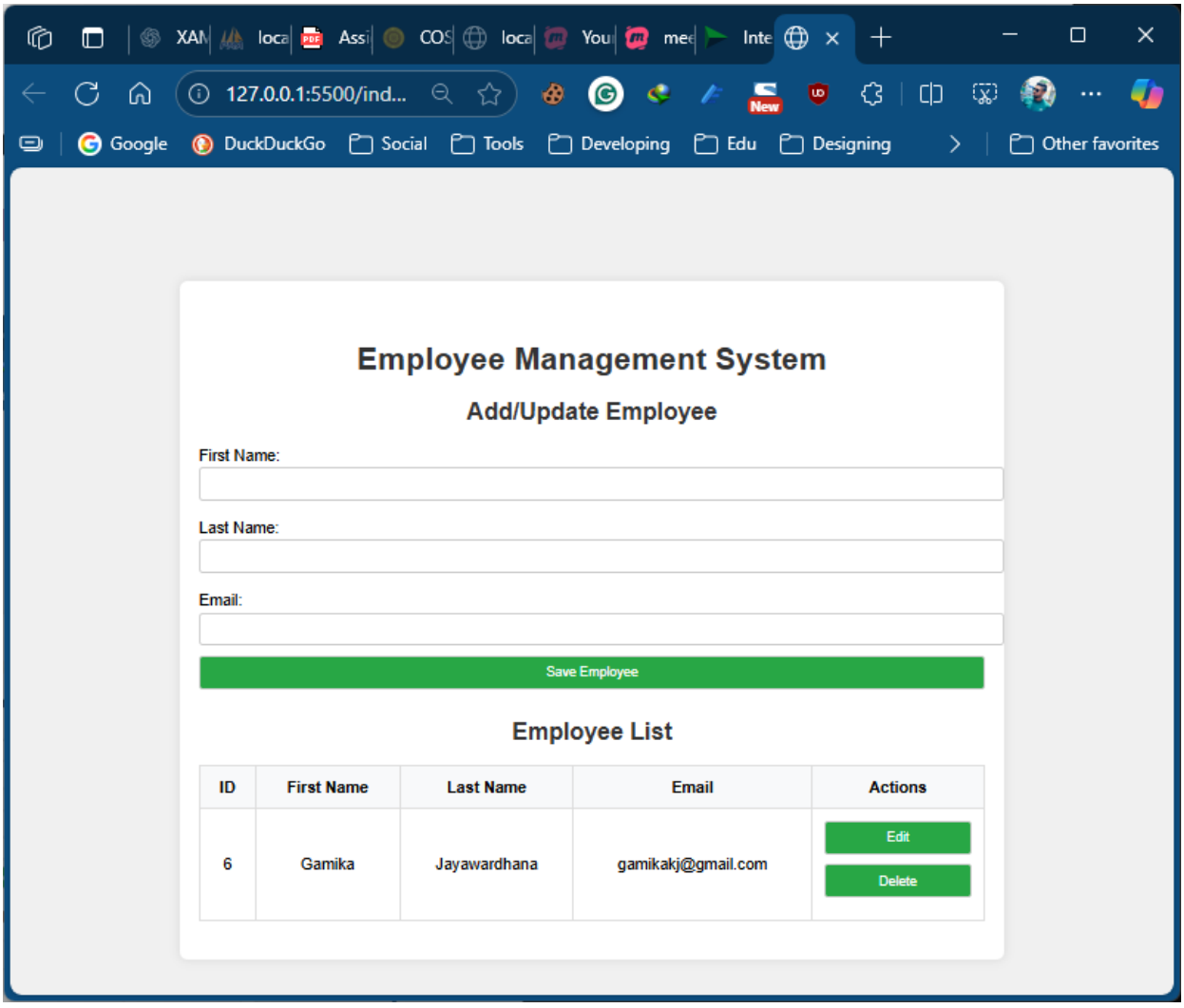


Frontend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Google
DuckDuckGo
Social
Tools
Developing
Edu
Designing
Other favorites
Employee Management System
Add/Update Employee
First Name:
Last Name:
Email:
Save Employee
Employee List
ID
First Name
Last Name
Email
Actions
6
Gamika
Jayawardhana
gamikakj@gmail.com
Edit
Delete