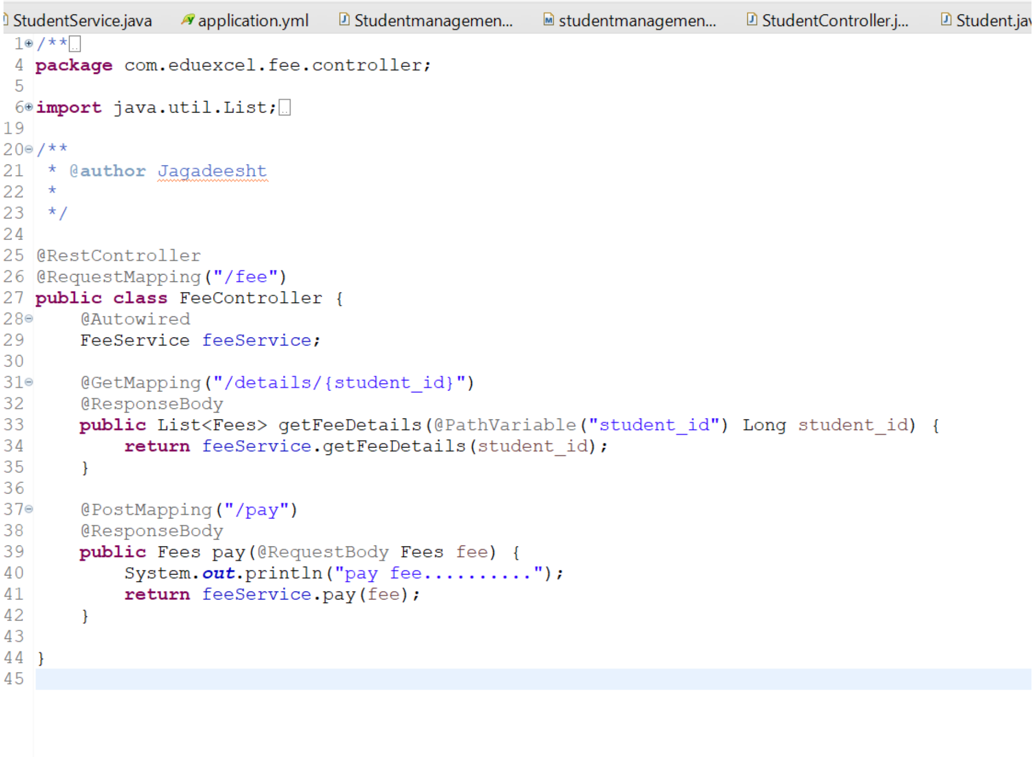
Assignment -4

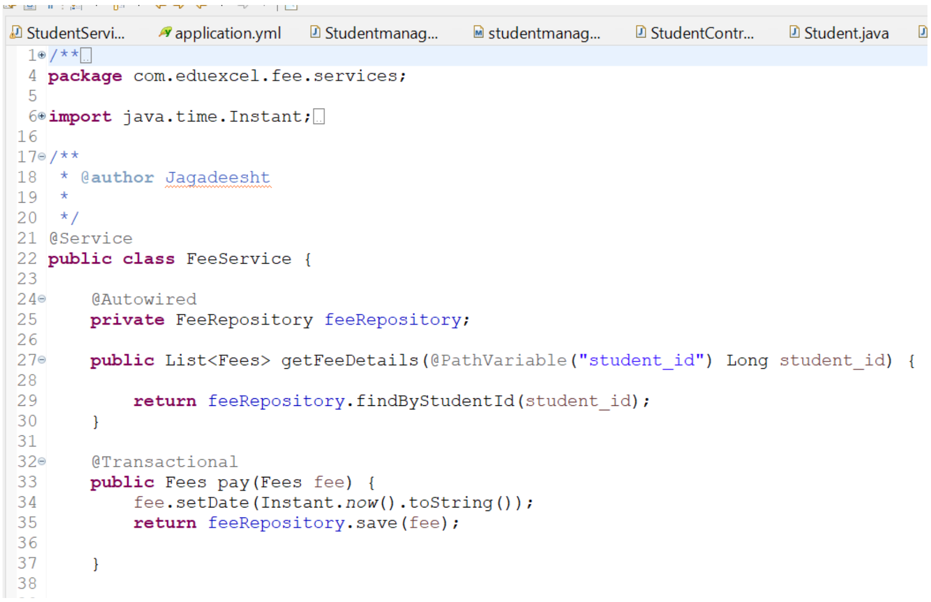
1. An API to fetch all fees paid by a student
2. An API to pay fees for a student

Fee Service Controller having two services /details and /pay

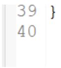


```
/**
package com.eduexcel.fee.controller;

import java.util.List;

/**
 * @author Jagadeesht
 *
 */

@RestController
@RequestMapping("/fee")
public class FeeController {
    @Autowired
    FeeService feeService;

    @GetMapping("/details/{student_id}")
    @ResponseBody
    public List<Fees> getFeeDetails(@PathVariable("student_id") Long student_id) {
        return feeService.getFeeDetails(student_id);
    }

    @PostMapping("/pay")
    @ResponseBody
    public Fees pay(@RequestBody Fees fee) {
        System.out.println("pay fee..........");
        return feeService.pay(fee);
    }

}
```

FeeService

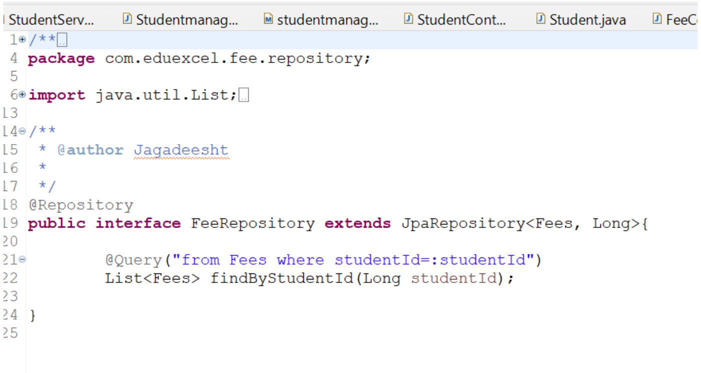


```
/**
package com.eduexcel.fee.services;

import java.time.Instant;

/**
 * @author Jagadeesht
 *
 */
@Service
public class FeeService {

    @Autowired
    private FeeRepository feeRepository;

    public List<Fees> getFeeDetails(@PathVariable("student_id") Long student_id) {

        return feeRepository.findByStudentId(student_id);
    }

    @Transactional
    public Fees pay(Fees fee) {
        fee.setDate(Instant.now().toString());
        return feeRepository.save(fee);

    }

```



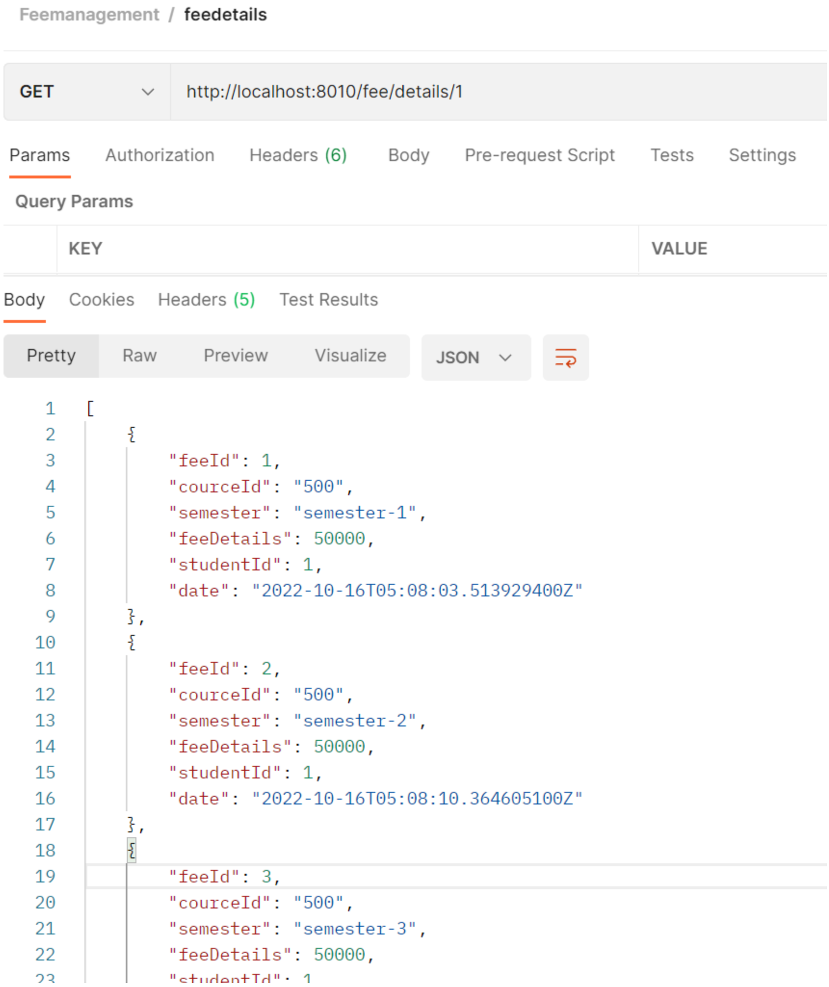
```
}
```

FeeRepository



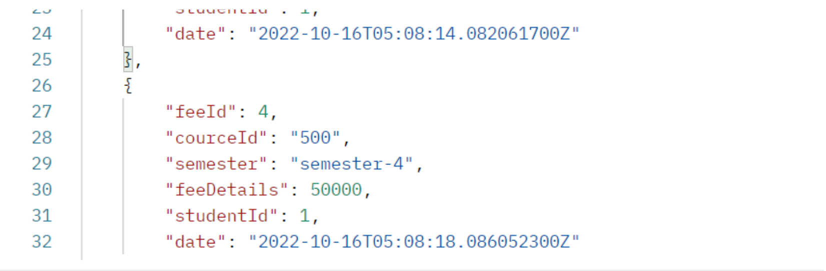
```
/**
package com.eduexcel.fee.repository;

import java.util.List;

/**
 * @author Jagadeesht
 *
 */
@Repository
public interface FeeRepository extends JpaRepository<Fees, Long>{

        @Query("from Fees where studentId=:studentId")
        List<Fees> findByStudentId(Long studentId);

}
```

Result for fee details



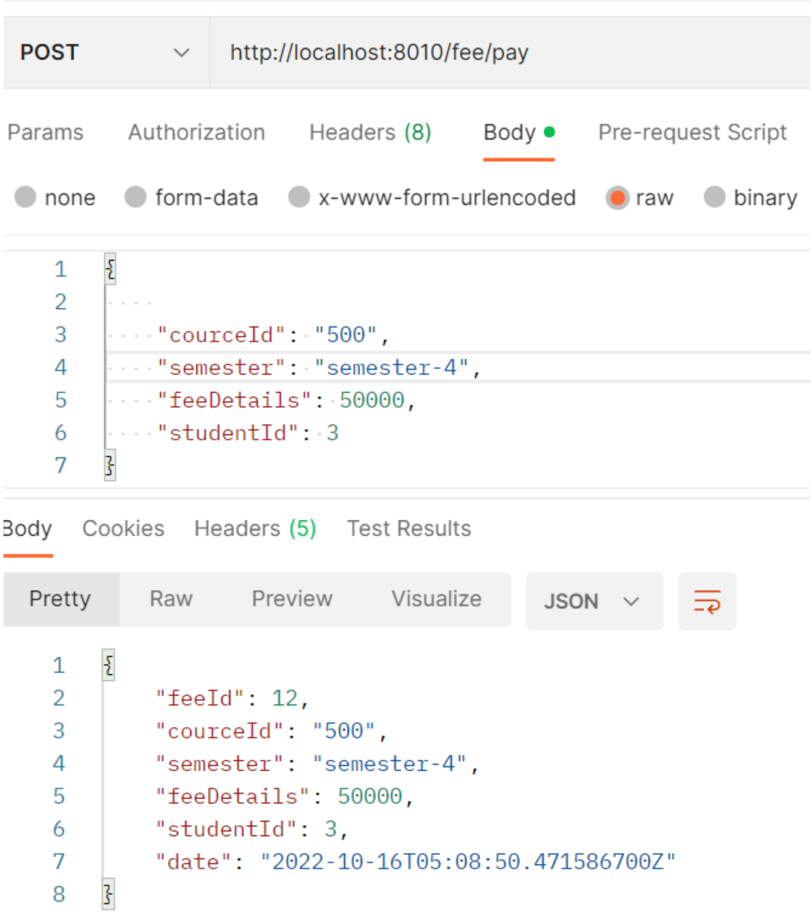
GET http://localhost:8010/fee/details/1

```
[
    {
        "feeId": 1,
        "courceId": "500",
        "semester": "semester-1",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:03.513929400Z"
    },
    {
        "feeId": 2,
        "courceId": "500",
        "semester": "semester-2",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:10.364605100Z"
    },
    {
        "feeId": 3,
        "courceId": "500",
        "semester": "semester-3",
        "feeDetails": 50000,
        "studentId": 1
```



```
        "studentId": 1,
        "date": "2022-10-16T05:08:14.082061700Z"
    },
    {
        "feeId": 4,
        "courceId": "500",
        "semester": "semester-4",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:18.086052300Z"
```

/pay

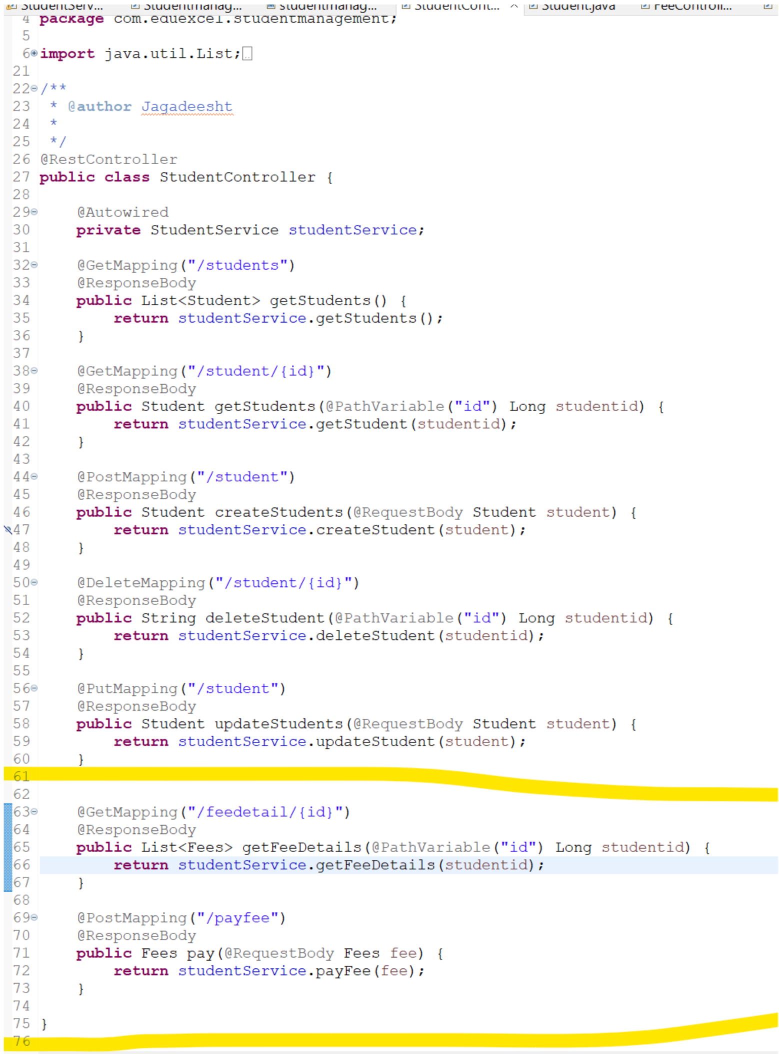


POST http://localhost:8010/fee/pay

```
{
    
    "courceId": "500",
    "semester": "semester-4",
    "feeDetails": 50000,
    "studentId": 3
}
```

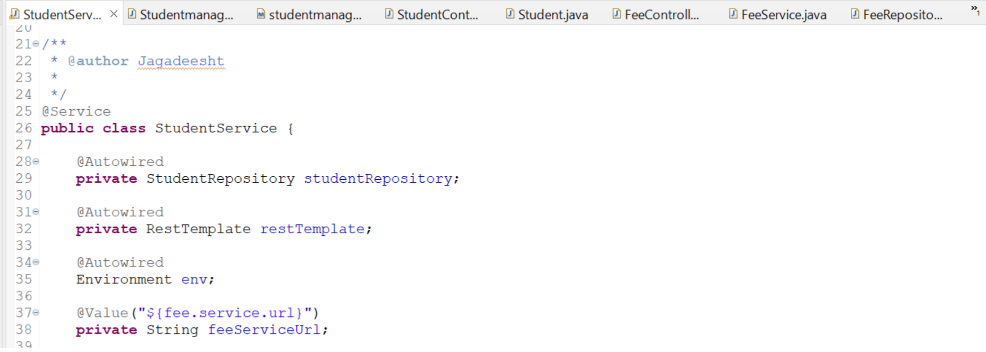
```
{
    "feeId": 12,
    "courceId": "500",
    "semester": "semester-4",
    "feeDetails": 50000,
    "studentId": 3,
    "date": "2022-10-16T05:08:50.471586700Z"
}
```

Updated Student API to invoke the fee management service APIs

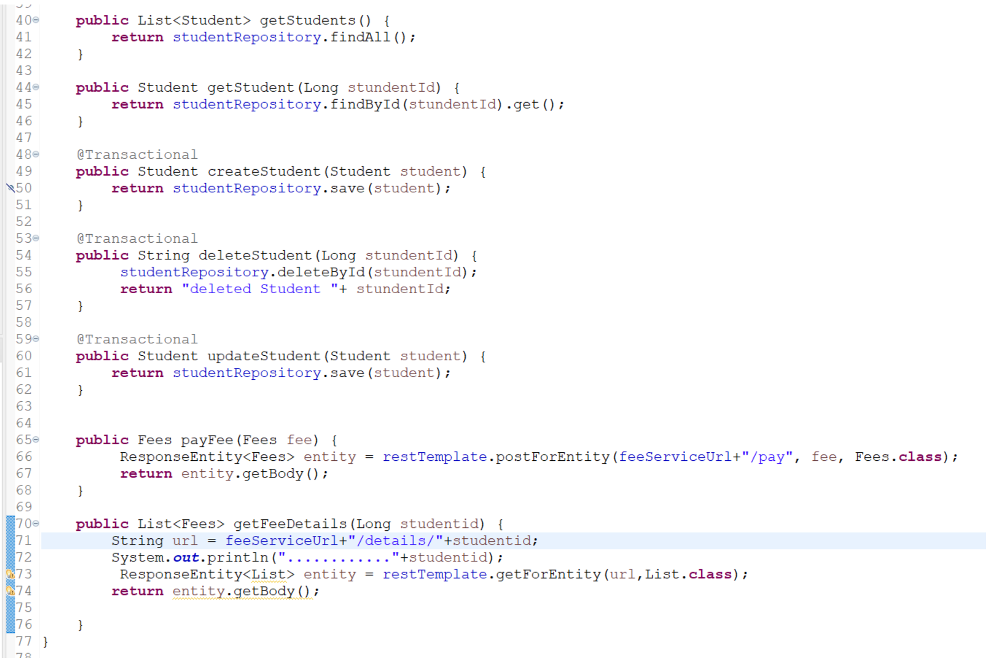


```java
package com.eduexcel.studentmanagement;

import java.util.List;
/**
 * @author Jagadeesht
 *
 */
@RestController
public class StudentController {

    @Autowired
    private StudentService studentService;

    @GetMapping("/students")
    @ResponseBody
    public List<Student> getStudents() {
        return studentService.getStudents();
    }

    @GetMapping("/student/{id}")
    @ResponseBody
    public Student getStudents(@PathVariable("id") Long studentid) {
        return studentService.getStudent(studentid);
    }

    @PostMapping("/student")
    @ResponseBody
    public Student createStudents(@RequestBody Student student) {
        return studentService.createStudent(student);
    }

    @DeleteMapping("/student/{id}")
    @ResponseBody
    public String deleteStudent(@PathVariable("id") Long studentid) {
        return studentService.deleteStudent(studentid);
    }

    @PutMapping("/student")
    @ResponseBody
    public Student updateStudents(@RequestBody Student student) {
        return studentService.updateStudent(student);
    }


    @GetMapping("/feedetail/{id}")
    @ResponseBody
    public List<Fees> getFeeDetails(@PathVariable("id") Long studentid) {
        return studentService.getFeeDetails(studentid);
    }

    @PostMapping("/payfee")
    @ResponseBody
    public Fees pay(@RequestBody Fees fee) {
        return studentService.payFee(fee);
    }

}
```

Student Service has Autowired RestTemplate to call Fee management API

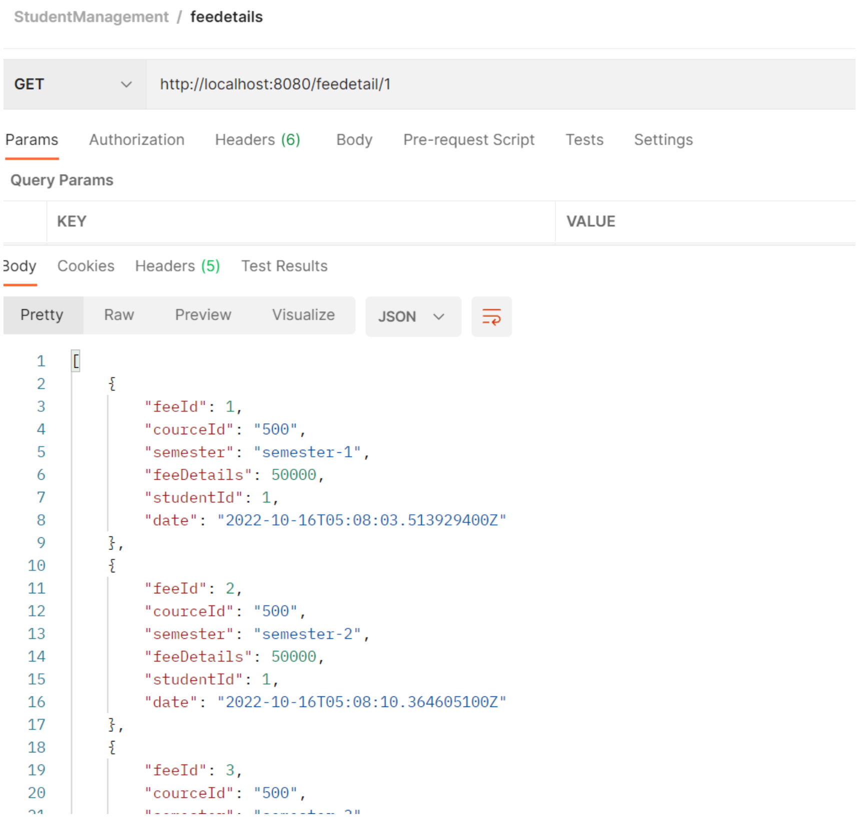


```java
/**
 * @author Jagadeesht
 *
 */
@Service
public class StudentService {

    @Autowired
    private StudentRepository studentRepository;

    @Autowired
    private RestTemplate restTemplate;

    @Autowired
    Environment env;

    @Value("${fee.service.url}")
    private String feeServiceUrl;
```



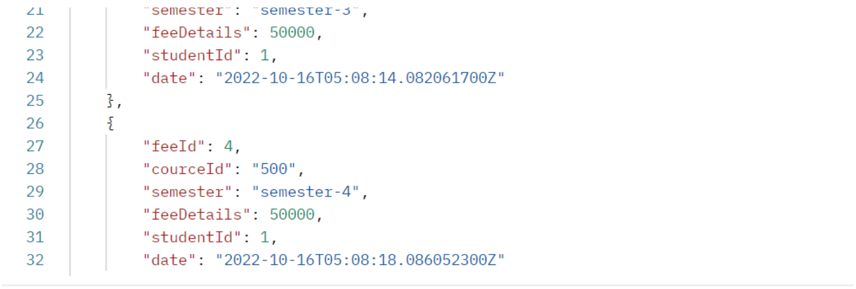
```java
    public List<Student> getStudents() {
        return studentRepository.findAll();
    }

    public Student getStudent(Long stundentId) {
        return studentRepository.findById(stundentId).get();
    }

    @Transactional
    public Student createStudent(Student student) {
        return studentRepository.save(student);
    }

    @Transactional
    public String deleteStudent(Long stundentId) {
         studentRepository.deleteById(stundentId);
         return "deleted Student "+ stundentId;
    }

    @Transactional
    public Student updateStudent(Student student) {
        return studentRepository.save(student);
    }


    public Fees payFee(Fees fee) {
         ResponseEntity<Fees> entity = restTemplate.postForEntity(feeServiceUrl+"/pay", fee, Fees.class);
         return entity.getBody();
    }

    public List<Fees> getFeeDetails(Long studentid) {
        String url = feeServiceUrl+"/details/"+studentid;
        System.out.println("..........."+studentid);
         ResponseEntity<List> entity = restTemplate.getForEntity(url,List.class);
        return entity.getBody();

    }
}
```

Test Result



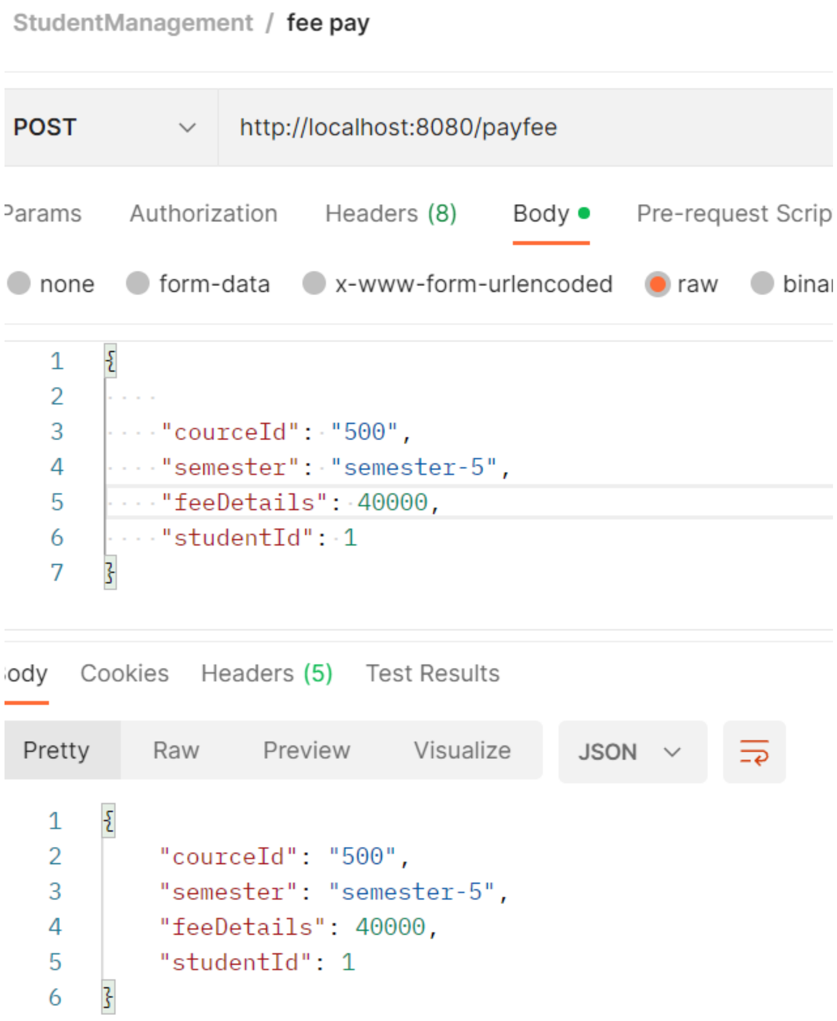
http://localhost:8080/feedetail/1

```
[
    {
        "feeId": 1,
        "courceId": "500",
        "semester": "semester-1",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:03.513929400Z"
    },
    {
        "feeId": 2,
        "courceId": "500",
        "semester": "semester-2",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:10.364605100Z"
    },
    {
        "feeId": 3,
        "courceId": "500",
```



```
        "semester": "semester-3",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:14.082061700Z"
    },
    {
        "feeId": 4,
        "courceId": "500",
        "semester": "semester-4",
        "feeDetails": 50000,
        "studentId": 1,
        "date": "2022-10-16T05:08:18.086052300Z"
```

/pay -result



POST http://localhost:8080/payfee

```
{
    
    "courceId": "500",
    "semester": "semester-5",
    "feeDetails": 40000,
    "studentId": 1
}
```

```
{
    "courceId": "500",
    "semester": "semester-5",
    "feeDetails": 40000,
    "studentId": 1
}
```