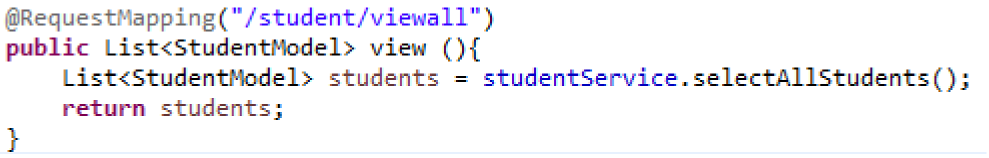
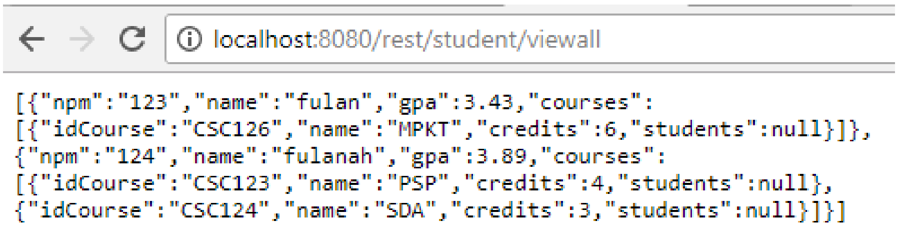
Abdul Raziq Andri
1506757560
Tutorial 7

1. Latihan 1



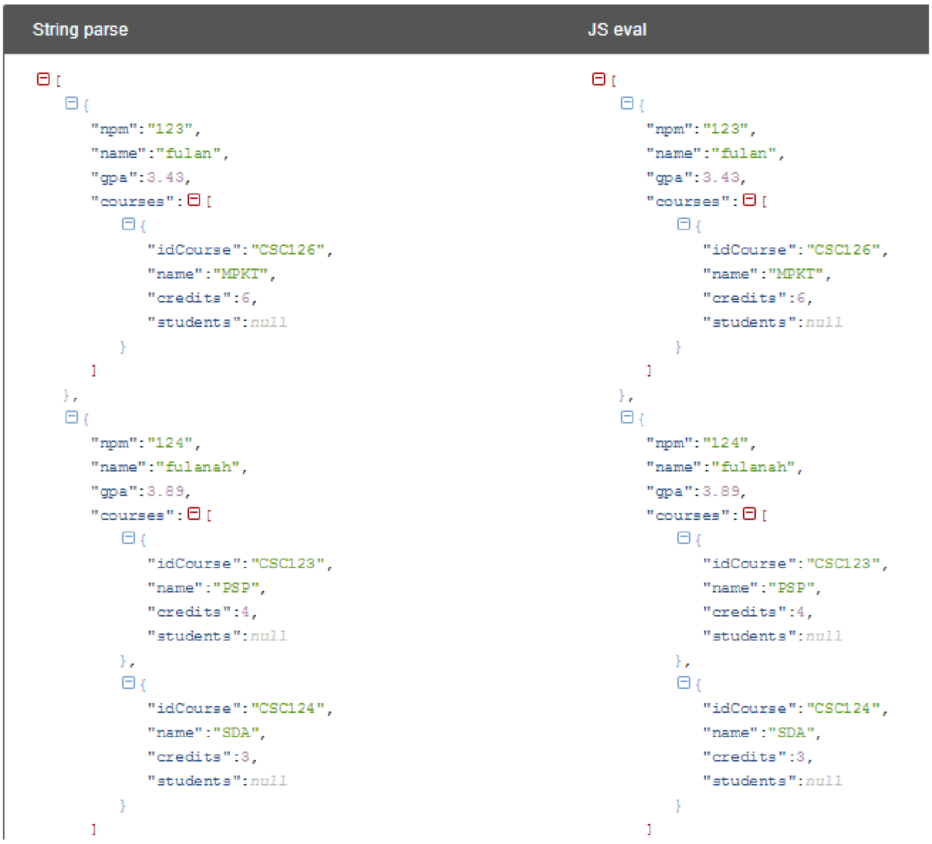
```
@RequestMapping("/student/viewall")
public List<StudentModel> view (){
    List<StudentModel> students = studentService.selectAllStudents();
    return students;
}
```

Method tersebut akan menerima url “/rest/student/viewall”, lalu akan melakukan pengambilan data seluruh mahasiswa yang ada dengan menggunakan method yang ada pada service. Data tersebut disimpan dalam objek students dengan tipe data List<StudentModel>. Setelah data didapatkan, maka akan ditampilkan data semua student yang terdapat pada students



localhost:8080/rest/student/viewall

```
[{"npm":"123","name":"fulan","gpa":3.43,"courses":
[{"idCourse":"CSC126","name":"MPKT","credits":6,"students":null}]},
{"npm":"124","name":"fulanah","gpa":3.89,"courses":
[{"idCourse":"CSC123","name":"PSP","credits":4,"students":null},
{"idCourse":"CSC124","name":"SDA","credits":3,"students":null}]}]
```



String parse

```
⊟[
  ⊟{
     "npm":"123",
     "name":"fulan",
     "gpa":3.43,
     "courses":⊟[
        ⊟{
           "idCourse":"CSC126",
           "name":"MPKT",
           "credits":6,
           "students":null
        }
     ]
  },
  ⊟{
     "npm":"124",
     "name":"fulanah",
     "gpa":3.89,
     "courses":⊟[
        ⊟{
           "idCourse":"CSC123",
           "name":"PSP",
           "credits":4,
           "students":null
        },
        ⊟{
           "idCourse":"CSC124",
           "name":"SDA",
           "credits":3,
           "students":null
        }
     ]
```

JS eval

```
⊟[
  ⊟{
     "npm":"123",
     "name":"fulan",
     "gpa":3.43,
     "courses":⊟[
        ⊟{
           "idCourse":"CSC126",
           "name":"MPKT",
           "credits":6,
           "students":null
        }
     ]
  },
  ⊟{
     "npm":"124",
     "name":"fulanah",
     "gpa":3.89,
     "courses":⊟[
        ⊟{
           "idCourse":"CSC123",
           "name":"PSP",
           "credits":4,
           "students":null
        },
        ⊟{
           "idCourse":"CSC124",
           "name":"SDA",
           "credits":3,
           "students":null
        }
     ]
```

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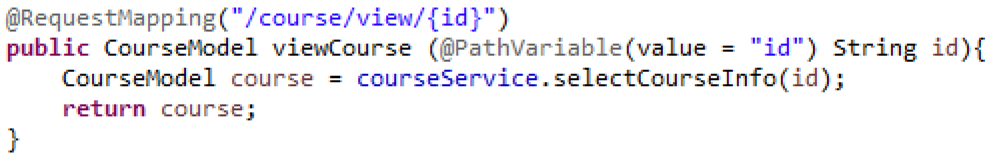
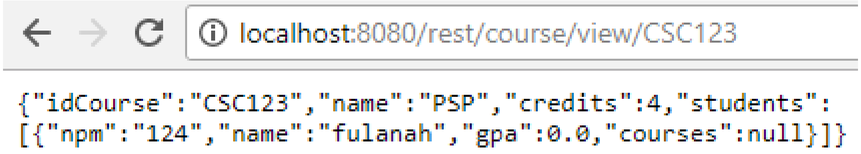
2. Latihan 2
    a. Method menampilkan satu course

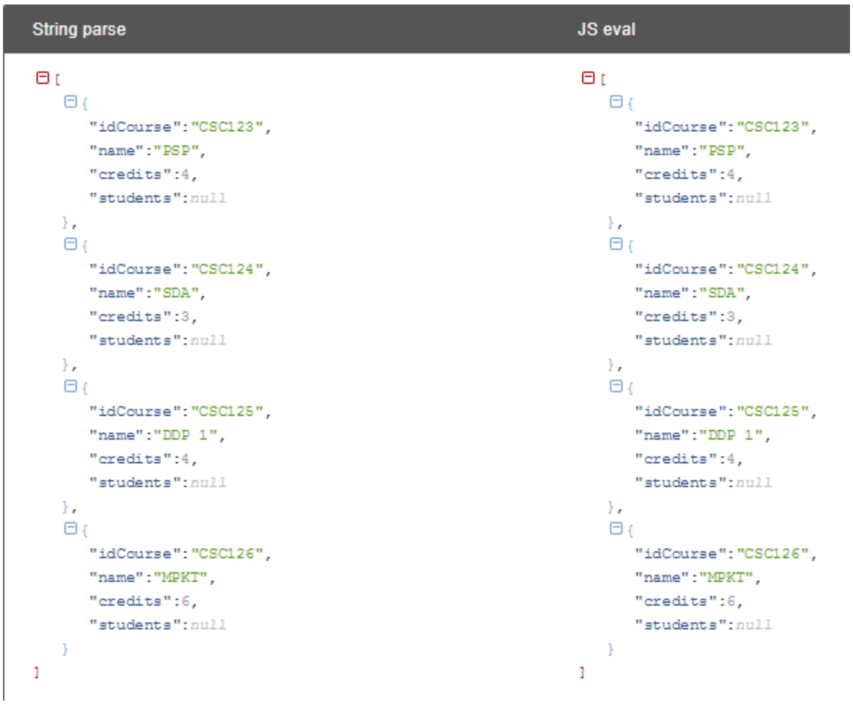


```
@RequestMapping("/course/view/{id}")
public CourseModel viewCourse (@PathVariable(value = "id") String id){
    CourseModel course = courseService.selectCourseInfo(id);
    return course;
}
```

Method tersebut akan menerima url “/rest/course/view” dengan variable “id”, lalu akan melakukan pengambilan data suatu course dengan id yang sesuai menggunakan method yang ada pada service. Data tersebut disimpan dalam objek course dengan tipe data CoursesModel. Setelah data didapatkan, maka akan ditampilkan data course



```
{"idCourse":"CSC123","name":"PSP","credits":4,"students":
[{"npm":"124","name":"fulanah","gpa":0.0,"courses":null}]}
```



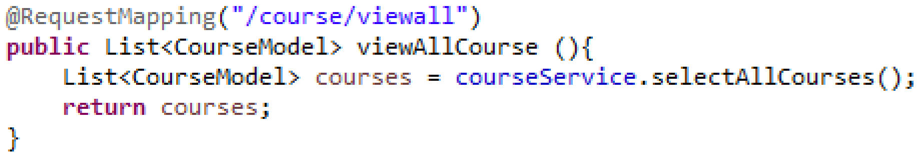
String parse

```
[
    {
        "idCourse":"CSC123",
        "name":"PSP",
        "credits":4,
        "students":null
    },
    {
        "idCourse":"CSC124",
        "name":"SDA",
        "credits":3,
        "students":null
    },
    {
        "idCourse":"CSC125",
        "name":"DDP 1",
        "credits":4,
        "students":null
    },
    {
        "idCourse":"CSC126",
        "name":"MPKT",
        "credits":6,
        "students":null
    }
]
```

JS eval

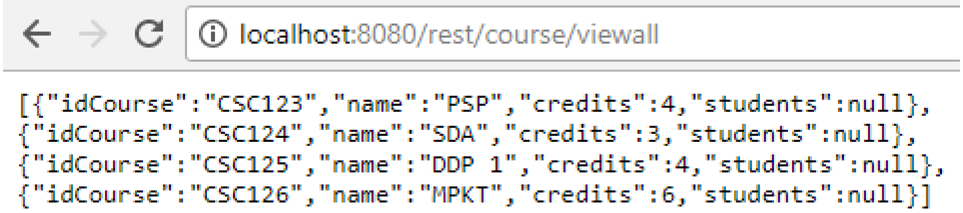
```
[
    {
        "idCourse":"CSC123",
        "name":"PSP",
        "credits":4,
        "students":null
    },
    {
        "idCourse":"CSC124",
        "name":"SDA",
        "credits":3,
        "students":null
    },
    {
        "idCourse":"CSC125",
        "name":"DDP 1",
        "credits":4,
        "students":null
    },
    {
        "idCourse":"CSC126",
        "name":"MPKT",
        "credits":6,
        "students":null
    }
]
```

b. Method menampilkan seluruh course

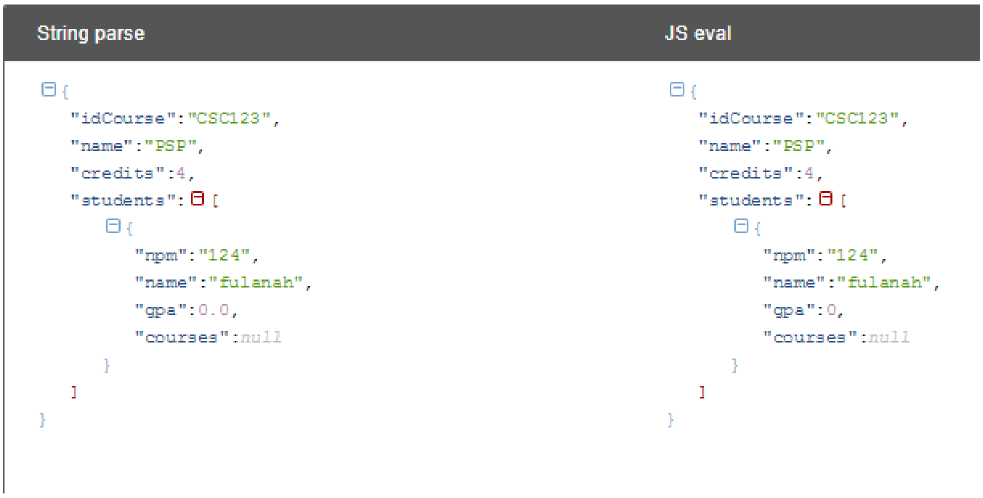


```
@RequestMapping("/course/viewall")
public List<CourseModel> viewAllCourse (){
    List<CourseModel> courses = courseService.selectAllCourses();
    return courses;
}
```

Method tersebut akan menerima url “/rest/courses/viewall”, lalu akan melakukan pengambilan data seluruh course yang ada dengan menggunakan method yang ada pada service. Data tersebut disimpan dalam objek courses dengan tipe data List<CourseModel>. Setelah data didapatkan, maka akan ditampilkan data semua course yang terdapat pada courses



```
[{"idCourse":"CSC123","name":"PSP","credits":4,"students":null},
{"idCourse":"CSC124","name":"SDA","credits":3,"students":null},
{"idCourse":"CSC125","name":"DDP 1","credits":4,"students":null},
{"idCourse":"CSC126","name":"MPKT","credits":6,"students":null}]
```



```
{
    "idCourse":"CSC123",
    "name":"PSP",
    "credits":4,
    "students":[
        {
            "npm":"124",
            "name":"fulanah",
            "gpa":0.0,
            "courses":null
        }
    ]
}
```

```
{
    "idCourse":"CSC123",
    "name":"PSP",
    "credits":4,
    "students":[
        {
            "npm":"124",
            "name":"fulanah",
            "gpa":0,
            "courses":null
        }
    ]
}
```

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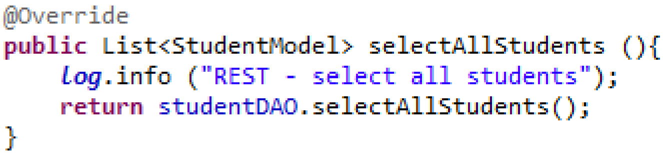
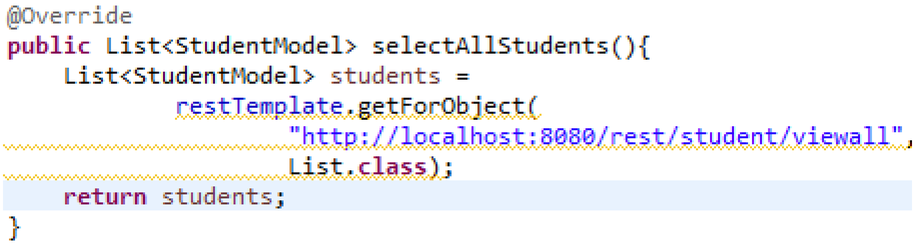
3. Latihan 3

   Controller akan memanggil method selectAllStudents yang terdapat pada class StudentServiceRest



```
@Override
public List<StudentModel> selectAllStudents (){
    log.info ("REST - select all students");
    return studentDAO.selectAllStudents();
}
```

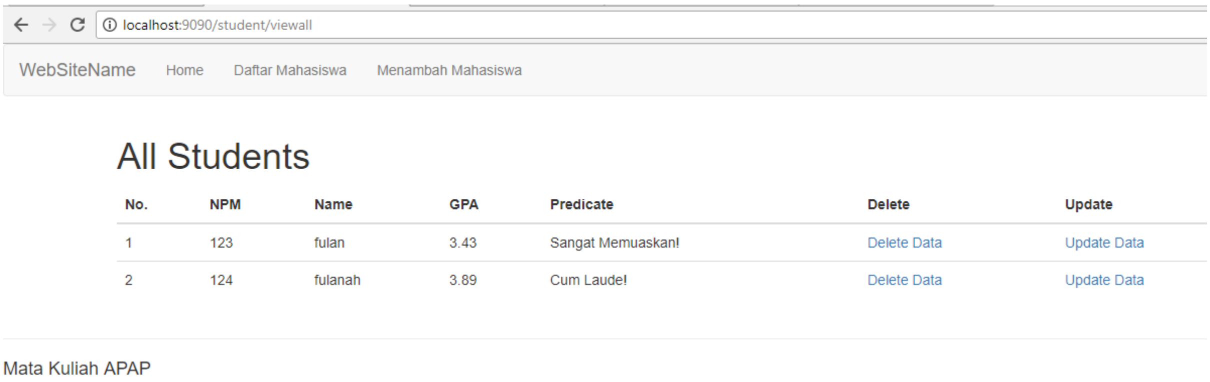
   Class ini kemudian akan memanggil method selectAllStudents yang terdapat pada class yang mengimplementasi StudentDAO yaitu StudentDAOImpl



```
@Override
public List<StudentModel> selectAllStudents(){
    List<StudentModel> students =
            restTemplate.getForObject(
                    "http://localhost:8080/rest/student/viewall",
                    List.class);
    return students;
}
```

   Selanjutnya method ini akan mengambil informasi dari producer lalu mengembalikannya dalam objek students dengan tipe data List<StudentModel>, dimana data ini kemudian akan dibawa ke Controller kembali

   Controller kemudian akan mengembalikan halaman yang berfungsi menampilkan data yang ada



All Students

No.	NPM	Name	GPA	Predicate	Delete	Update
1	123	fulan	3.43	Sangat Memuaskan!	Delete Data	Update Data
2	124	fulanah	3.89	Cum Laude!	Delete Data	Update Data

Mata Kuliah APAP

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4. Latihan 4