Hasya Afina Sujani P – 1406563626
APAP

WRITE-UP

Pertanyaan

1. Karena tidak menggunakan atribut required maka pengecekan *backend* nya bisa dilakukan dengan memodifikasi struktur tabel di SQL nya, misalnya untuk atribut yg tidak boleh *null* bisa diset sebuah nilai *defaut* untuk menghindari kesalahan. Untuk validasi tipe data (numeric, dll.) akan lebih mudah untuk melakukan validasi pada level HTML.
2. Salah satu perbedaan method GET dan POST adalah data pada method GET dapat di*cache* sedangkan method POST tidak. Untuk submit form agar data lebih aman (tidak bisa di*cache*) maka lebih baik menggunakan method POST. Method GET sebaiknya digunakan untuk retrieve data saja.
3. Tidak, karena penggunaan method harus dispecify dari awal yang mana yg digunakan dan hanya bisa salah satu aja.

Method Delete

Di mapper taruh query yg bakal diexecute terus bikin methodnya yg bakal make parameter npm

```
@Delete("delete from student where npm = #{npm}")
void deleteStudent (@Param("npm") String npm);
```

Trus di service database panggil method di mapper + add log buat debug

```
@Override
public void deleteStudent (String npm)
{
    log.info ("student {} deleted", npm);
    studentMapper.deleteStudent(npm);
}
```

Di controller kasih validasi dulu student yg mau didelete ada ga, kalo ada delete trus direct ke halaman delete, kalo ga ada direct ke halaman not found.

```
@RequestMapping("/student/delete/{npm}")
public String delete (Model model, @PathVariable(value = "npm") String npm)
{
    StudentModel student = studentDAO.selectStudent (npm);

    if (student != null) {
        studentDAO.deleteStudent (npm);
        return "delete";
    } else {
        model.addAttribute ("npm", npm);
        return "not-found";
    }
}
```

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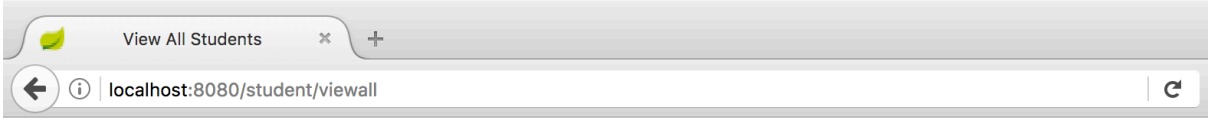
APAP

Halaman view all



All Students

No. 1

NPM = 123

Name = Tinky Winky

GPA = 3.4

Delete Data

No. 2

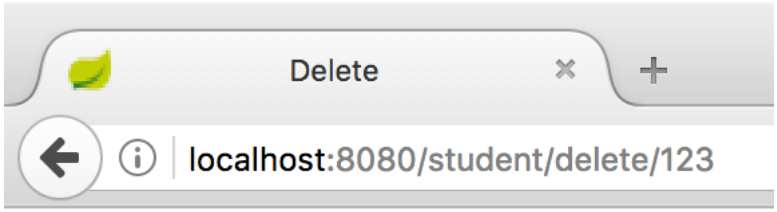
NPM = 456

Name = Chanek Jr.

GPA = 3.4

Delete Data

Setelah klik Delete Data pada NPM 123



Data berhasil dihapus

Kembali ke halaman view all, data yang dihapus sudah tidak muncul

All Students

No. 1

NPM = 456

Name = Chanek Jr.

GPA = 3.4

Delete Data

Hasya Afina Sujani P – 1406563626
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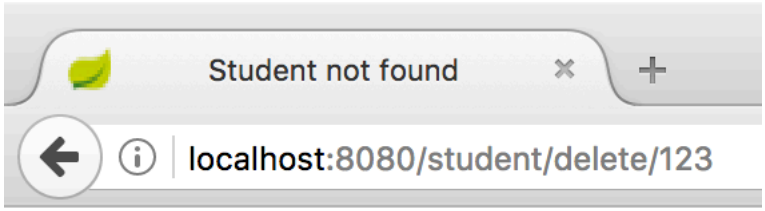
Kalo dicoba delete NPM 123 lagi, bakal didirect ke halaman not found



Student not found

NPM = 123

Method Update
Query update di mapper, paramnya ga pake StudentModel karena bentuknya form kaya proses addStudent, jadi yg diperlukan langsung atribut-atributnya

```
@Update("update student set name = #{name}, gpa = ${gpa} where npm = ${npm}")
void updateStudent (@Param("npm") String npm, @Param("name") String name, @Param("gpa") double gpa);
```

Service database

```
@Override
public void updateStudent (String npm, String name, double gpa)
{
    log.info ("update student npm {} ", npm);
    studentMapper.updateStudent(npm, name, gpa);
}
```

Di controller, ada dua mapping yang diperlukan. Pertama, mapping untuk direct ke halaman update form. Pada mapping ini ada validasi juga apakah npm dari student yg mau diupdate itu ada atau tidak.

```
@RequestMapping("/student/update/{npm}")
public String updatePath (Model model,
                          @PathVariable(value = "npm") String npm)
{
    StudentModel student = studentDAO.selectStudent (npm);

    if (student != null) {
        model.addAttribute ("student", student);
        return "form-update";
    } else {
        model.addAttribute ("npm", npm);
        return "not-found";
    }
}
```

Hasya Afina Sujani P – 1406563626
APAP

Mapping kedua untuk submit. Requestparam nya sama seperti prosess add student.

```
@RequestMapping("/student/update/submit")
public String updateSubmit (
        @RequestParam(value = "npm", required = false) String npm,
        @RequestParam(value = "name", required = false) String name,
        @RequestParam(value = "gpa", required = false) double gpa)
{
    studentDAO.updateStudent (npm, name, gpa);
    return "success-update";
}
```

Halaman form-update yang diambil dari proses add dengan sedikit perubahan

```
<!DOCTYPE HTML>
<html xmlns="http://www.w3.org/1999/xhtml"
    xmlns:th="http://www.thymeleaf.org">
<head>

<title>Add student</title>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
</head>

<body>

    <h1 class="page-header">Problem Editor</h1>

    <form action="/student/update/submit" method="post">
        <div>
            <label for="npm">NPM</label> <input type="text" name="npm" readonly="true" th:value="${student.npm}" />
        </div>
        <div>
            <label for="name">Name</label> <input type="text" name="name" th:value="${student.name}" />
        </div>
        <div>
            <label for="gpa">GPA</label> <input type="text" name="gpa" th:value="${student.gpa}" />
        </div>

        <div>
            <button type="submit" name="action" value="save">Save</button>
        </div>
    </form>

</body>
```

Halaman success-update

```
<html>
    <head>
        <title>Add</title>
    </head>
    <body>
        <h2>Data berhasil diubah</h2>
    </body>
</html>
```

Hasya Afina Sujani P – 1406563626
APAP

Pada halaman viewall saya tambahkan link untuk update data

```
<!DOCTYPE html>
<html xmlns:th="http://www.thymeleaf.org">
    <head>
        <title>View All Students</title>
    </head>
    <body>
        <h1>All Students</h1>

        <div th:each="student,iterationStatus: ${students}">
            <h3 th:text="'No. ' + ${iterationStatus.count}">No. 1</h3>
            <h3 th:text="'NPM = ' + ${student.npm}">Student NPM</h3>
            <h3 th:text="'Name = ' + ${student.name}">Student Name</h3>
            <h3 th:text="'GPA = ' + ${student.gpa}">Student GPA</h3>
            <a th:href="'/student/delete/' + ${student.npm}">Delete Data</a>
            <a th:href="'/student/update/' + ${student.npm}">Update Data</a>
            <hr/>
        </div>
    </body>
</html>
```

Data pada halaman viewall

All Students

No. 1

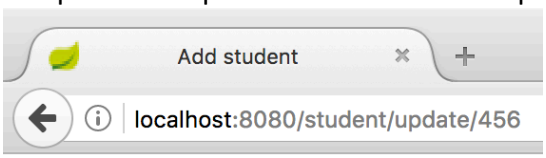
NPM = 456

Name = Chanek Jr.

GPA = 3.4

Delete Data Update Data

Klik pada link Update Data dan lakukan perubahan pada data (gpa)



Problem Editor

NPM 456
Name Chanek Jr.
GPA 3.55
Save

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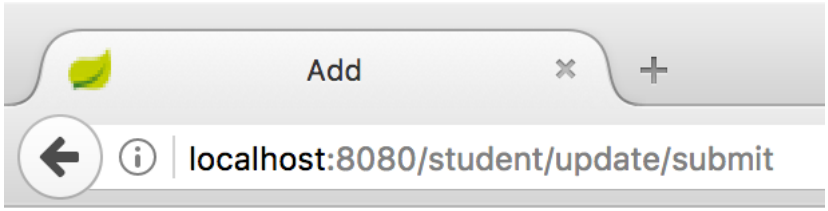
Klik submit



Data berhasil diubah

Kembali ke halaman viewall, perubahan data telah tersimpan

All Students

No. 1

NPM = 456

Name = Chanek Jr.

GPA = 3.55

Delete Data Update Data

Method Update dengan Parameter Object

Parameter method di mapper diganti jadi StudentModel

```
@Update("update student set name = #{name}, gpa = ${gpa} where npm = ${npm}")
void updateStudent (StudentModel student);
```

Di ServiceDatabase juga diganti parameter methodnya

```
@Override
public void updateStudent (StudentModel student)
{
    studentMapper.updateStudent(student);
}
```

Hasya Afina Sujani P – 1406563626
APAP

Controller yang diganti hanya mapping submitnya saja, parameternya diganti jadi StudentModel

```
@RequestMapping("/student/update/submit")
public String updateSubmit (
        @ModelAttribute StudentModel student)
{
    studentDAO.updateStudent (student);
    return "success-update";
}
```

perubahan di form-update.html diantaranya nambahin th:object di <form>, nambah th:field di setiap kolom input

```
<!DOCTYPE HTML>
<html xmlns="http://www.w3.org/1999/xhtml"
    xmlns:th="http://www.thymeleaf.org">
<head>

<title>Add student</title>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
</head>

<body>

    <h1 class="page-header">Problem Editor</h1>

    <form action="/student/update/submit" th:object="${student}" method="post">
        <div>
            <label for="npm">NPM</label> <input type="text" name="npm" readonly="true" th:field="*{npm}" th:value="${student.npm}
        </div>
        <div>
            <label for="name">Name</label> <input type="text" name="name" th:field="*{name}" th:value="${student.name}" />
        </div>
        <div>
            <label for="gpa">GPA</label> <input type="text" name="gpa" th:field="*{gpa}" th:value="${student.gpa}" />
        </div>

        <div>
            <button type="submit" name="action" value="save">Save</button>
        </div>
    </form>

</body>
```

Halaman view all data

All Students

No. 1

NPM = 456

Name = Chanek Jr.

GPA = 3.55

Delete Data Update Data

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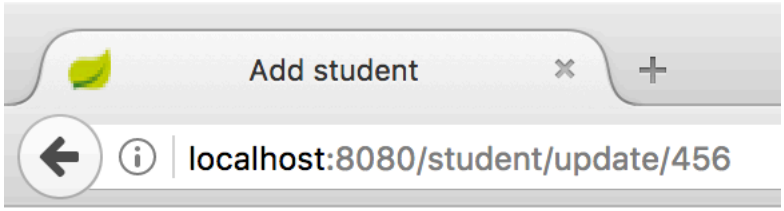
APAP

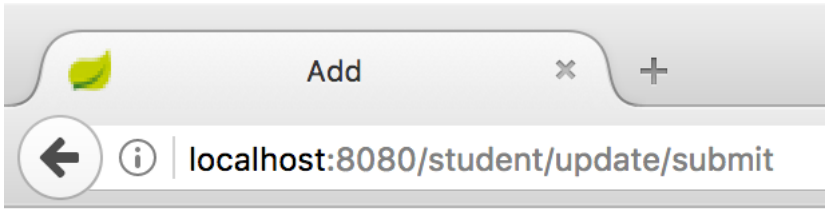
Klik Update Data lalu lakukan perubahan pada data (gpa)



Problem Editor

NPM 456
Name Chanek Jr.
GPA 3.75
Save

Kilk Save, sistem memberi notifikasi berhasil



Data berhasil diubah

Kembali ke halaman view all, perubahan data berhasil tersimpan

All Students

No. 1

NPM = 456

Name = Chanek Jr.

GPA = 3.75

Delete Data Update Data