

# Spring Day 3

## @PathVariable - 1 Variable

```
package com.carshop.study;

import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;

@Controller
@RequestMapping("/vari")
public class VariableController {

    @GetMapping("/names/{name}")
    public String namesMethod(@PathVariable String name, Model model) {
        model.addAttribute("data", "성명 : " + name);

        return "/study/name";
    }
}
```

name.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>

    ${data}

</body>
</html>
```

## @PathVariable - 2 Variables or More

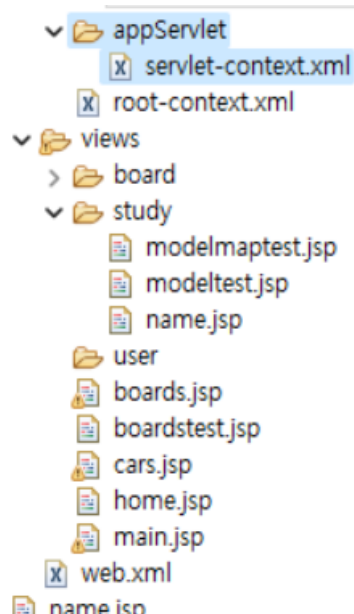
```
@GetMapping("/names/{name}/{gender}")
public String namesMethod2(
    @PathVariable String name,
    @PathVariable String gender,
    Model model) {
    model.addAttribute("data", "성명 : " + name + "<br>" +
        "성별 : " + gender);

    return "/study/name";
}
```

## @MatrixVariable

**!! 주의 MatrixVariable 을 사용하기 위해서는 반드시 사전에 설정을 먼저 해야만 사용할수 있다.**

servlet-context 의



```
<!-- Enables the Spring  
<annotation-driven />
```

```
<!-- Enables the Spring MVC @Controller programming model -->  
<annotation-driven enable-matrix-variables="true"/>
```

**enable-matrix-variables="true" 를 추가해야만 동작한다.**

```

@GetMapping("/names/cars/{carId}")
public String namesMethod3(
    @PathVariable String carId,
    @MatrixVariable String cate,
    Model model) {

    model.addAttribute("data", "차아یدی : " + carId + "<br>" +
        "차종 : " + cate);

    return "/study/name";
}

//http://localhost:8080/controller/vari/names/cars/%EC%86%8C%EB%82%98%ED%83%80;cate=%EC%A4%91%ED%98%95%EC%B0%A8

```

## @RequestParam

!! 가장 많이 사용하게될 방식이다.

```

@Controller
@RequestMapping("/param")
public class ParamController {

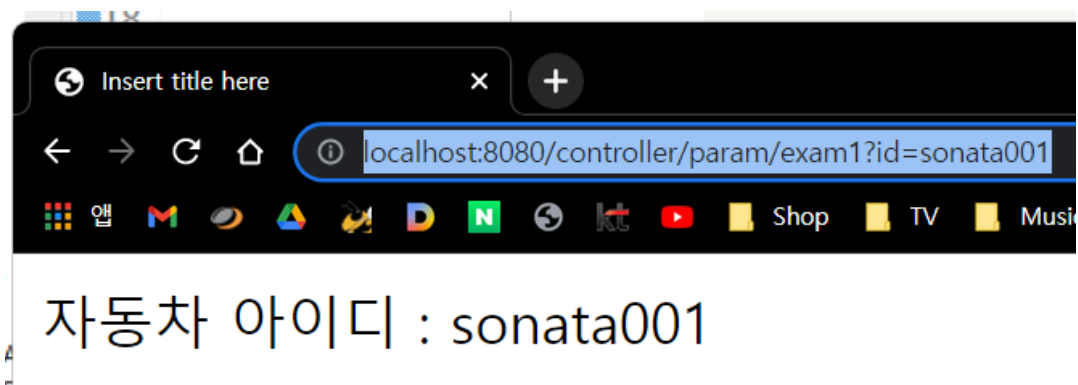
    @GetMapping("/exam1")
    public String exam1(@RequestParam String id, Model model) {

        model.addAttribute("data", "자동차 아이디 : " + id);

        return "/study/name";
    }
}

// http://localhost:8080/controller/param/exam1?id=sonata001

```



## @ModelAttribute

## @InitBinder

## !!! 실습.. 일치하는 정보를 찾아서 출력하기

### 1. Repository 설정

carId 값으로 조회하기 위해 설

CarRepository.java

```
public interface CarRepository {  
  
    List<CarDTO> getAllCarList();  
    List<CarDTO> getCarListByCategory(String category);  
    CarDTO getCarById(String carId);  
}
```

@Override

```
public CarDTO getCarById(String carId) {
```

```
    CarDTO carInfo = null;  
  
    for(int i = 0 ; i < listOfCars.size(); i++) {  
        CarDTO carDTO = listOfCars.get(i);  
        if(carDTO != null && carDTO.getCid() != null && carDTO.getCid().equals(carId)) {
```

```

        carInfo = carDTO;
    }
}

if(carInfo == null) {
    throw new IllegalArgumentException("자동차 ID 가" + carId + "인 자동차는 없습니다.");
}

return carInfo;
}

```

## CarRepositoryImpl.java

```

public CarDTO getCarById(String carId) {

    CarDTO carInfo = null;

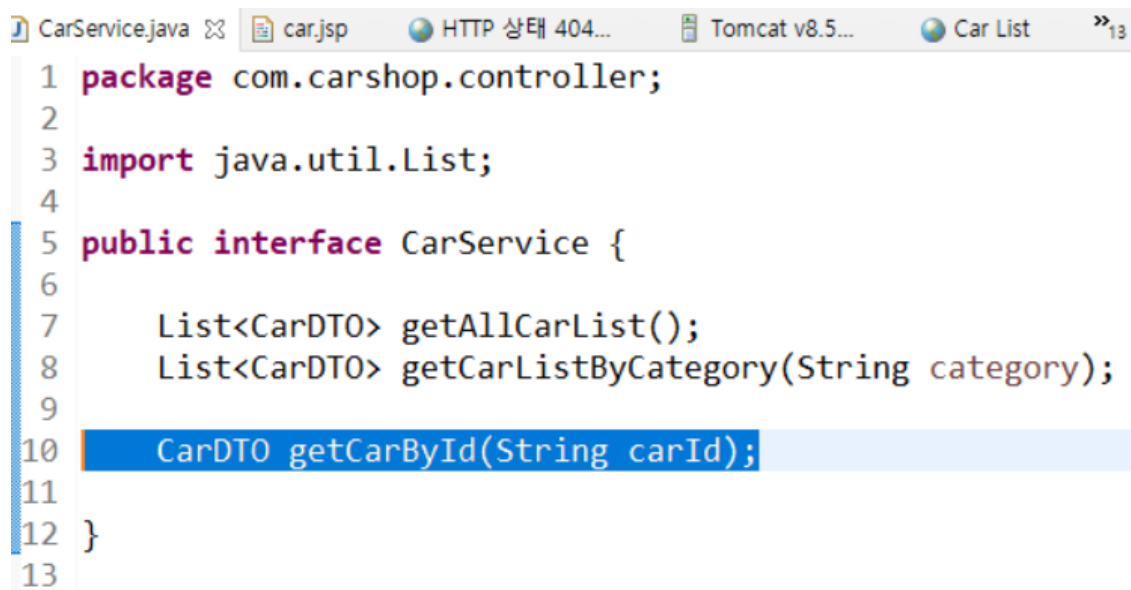
    for (int i = 0 ; i < listOfCars.size() ; i++) {
        CarDTO cardTO = listOfCars.get(i);
        if(cardTO != null && cardTO.getCid() != null && cardTO.getCid().equals(carId)) {
            carInfo = cardTO;
        }
    }

    if (carInfo == null) {
        throw new IllegalArgumentException("자동차 ID 가 " + carId + "인 자동차는 없습니다. ");
    }

    return carInfo;
}

```

## CarService.java



```

1 package com.carshop.controller;
2
3 import java.util.List;
4
5 public interface CarService {
6
7     List<CarDTO> getAllCarList();
8     List<CarDTO> getCarListByCategory(String category);
9
10    CarDTO getCarById(String carId);
11
12 }
13

```

## CarServiceImpl.java

```
package com.carshop.controller;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;

@Service
public class CarServiceImpl implements CarService {

    @Autowired
    private CarRepository carRepository;

    @Override
    public List<CarDTO> getAllCarList() {
        // TODO Auto-generated method stub
        return carRepository.getAllCarList();
    }

    public List<CarDTO> getCarListByCategory(String category) {
        List<CarDTO> carsByCategory = carRepository.getCarListByCategory(category);
        return carsByCategory;
    }

    public CarDTO getCarById(String carId) {

        CarDTO carById = carRepository.getCarById(carId);

        return carById;
    }
}
```

## CarController.java

```
@GetMapping("/car")
public String requestCarById(@RequestParam("id") String carId, Model model) {

    CarDTO carById = carService.getCarById(carId);
    model.addAttribute("car", carById);

    return "car";
}
```

## car.jsp

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Car Detail</title>
</head>
<body>
    <link
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css"
        rel="stylesheet"
        integrity="sha384-GLhLTQ8iRABdZLl603oVMWSktQOp6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD"
        crossorigin="anonymous">

    <nav class="navbar navbar-expand navbar-dark bg-dark"
        aria-label="Second navbar example">
        <div class="container-fluid">
            <a class="navbar-brand" href="#">CarShop</a>
            <button class="navbar-toggler" type="button"
                data-bs-toggle="collapse" data-bs-target="#navbarsExample02"
                aria-controls="navbarsExample02" aria-expanded="false"
                aria-label="Toggle navigation">
                <span class="navbar-toggler-icon"></span>
            </button>

            <div class="collapse navbar-collapse" id="navbarsExample02">
                <ul class="navbar-nav me-auto">
                    <li class="nav-item"><a class="nav-link active"
                        aria-current="page" href="#">홈</a></li>
                    <li class="nav-item"><a class="nav-link" href="/cars">차량
                        보기</a></li>
                    <li class="nav-item"><a class="nav-link" href="/boards">게시판</a>
                    </li>
                </ul>
                <form role="search">
                    <input class="form-control" type="search" placeholder="Search"
                        aria-label="Search">
                </form>
            </div>
        </div>
    </nav>

    <div class="alert alert-dark">
        <div class="container">
            <h1>차량 상세 보기</h1>
        </div>
    </div>

    <div class="container">
        <div class="row" align="center">

            <h3>${car.cid}</h3>
            <p>${car.cname}</p>
            <p>${car.cprice} 만원</p>
            <p>${car.ccate}</p>
            <p>${car.cdsc}</p>

        </div>
    </div>

    <script
        src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js"

```

```

        integrity="sha384-w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN"
        crossorigin="anonymous"></script>
</body>
</html>

```

addcar.jsp

컨트롤러에 정의한 객체명을

```

@GetMapping("/add")
public String requestAddCarForm(CardTO car) {

    return "addCar";
}

```

form 의 modelAttribute 속성값은 사용자 요청 URL 에 매칭되는 컨트롤러 안에 요청 처리 매서드의 매개변수로 선언한 객체이름과 일치해야 한다.

**modelAttribute="NewCar"**

**public String submitAddNewCar(@ModelAttribute("NewCar") CardTO car) {**

addCar.jsp

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<%@ taglib uri="http://www.springframework.org/tags/form" prefix="form"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>자동차 등록</title>
</head>
<body>
    <link
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css"
        rel="stylesheet"
        integrity="sha384-GlhlTQ8iRABdZL1603oVMWsktQ0p6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD"
        crossorigin="anonymous">

    <nav class="navbar navbar-expand navbar-dark bg-dark"
        aria-label="Second navbar example">
        <div class="container-fluid">
            <a class="navbar-brand" href="#">CarShop</a>
            <button class="navbar-toggler" type="button"

```



```

        data-bs-toggle="collapse" data-bs-target="#navbarsExample02"
        aria-controls="navbarsExample02" aria-expanded="false"
        aria-label="Toggle navigation">
        <span class="navbar-toggler-icon"></span>
    </button>

    <div class="collapse navbar-collapse" id="navbarsExample02">
        <ul class="navbar-nav me-auto">
            <li class="nav-item"><a class="nav-link active"
                aria-current="page" href="/">홈</a></li>
            <li class="nav-item"><a class="nav-link" href="/cars">차량
                보기</a></li>

            <li class="nav-item"><a class="nav-link" href="/add">차량
                등록</a></li>
            <li class="nav-item"><a class="nav-link" href="/boards">게시판</a>
            </li>
        </ul>
        <form role="search">
            <input class="form-control" type="search" placeholder="Search"
                aria-label="Search">
        </form>
    </div>
</div>
</nav>

<div class="alert alert-dark">
    <div class="container">
        <h1>차량 등록</h1>
    </div>
</div>

<form:form modelAttribute="NewCar" class="form-horizontal">
    <fieldset>
    <legend>${addTitle}</legend>
    자동차 ID : <form:input path="cid" class="form-control"/>
    자동차 이름 : <form:input path="cname" class="form-control"/>
    자동차 가격 : <form:input path="cprice" class="form-control"/>
    자동차 카테고리 : <form:input path="ccate" class="form-control"/>
    자동차 소개 : <form:textarea path="cdesc" cols="50" rows="2" class="form-control"/>

    <input type="submit" class="btn btn-primary" value="등록"/>

    </fieldset>
</form:form>

<script
    src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-w76AqPFDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN"
    crossorigin="anonymous"></script>
</body>
</html>

```

## CarController.java

```

package com.carshop.controller;

import java.util.List;

```

```

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.ModelAttribute;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;

@Controller
public class CarController {

    @Autowired
    private CarService carService;

    @RequestMapping("/cars")
    public String CarList(Model model) {
        List<CarDTO> list = carService.getAllCarList();
        model.addAttribute("carList", list);
        return "cars";
    }

    @GetMapping("/{ccate}")
    public String requestCarsByCategory(@PathVariable("ccate") String carCategory, Model model) {
        List<CarDTO> carsByCategory = carService.getCarListByCategory(carCategory);
        model.addAttribute("carList", carsByCategory);
        return "cars";
    }

    @GetMapping("/car")
    public String requestCarById(@RequestParam("id") String carId, Model model) {

        CarDTO carById = carService.getCarById(carId);
        model.addAttribute("car", carById);

        return "car";
    }

    @GetMapping("/add")
    public String requestAddCarForm(@ModelAttribute("NewCar") CarDTO car) {

        return "addCar";
    }

    @PostMapping("/add")
    public String submitAddNewCar(@ModelAttribute("NewCar") CarDTO car) {
        carService.setNewCar(car);
        return "redirect:/cars";
    }

    @ModelAttribute
    public void addAttributes(Model model) {
        model.addAttribute("addTitle", "신규 차량 등록");
    }
}

```