

2024년 상반기 K-디지털 트레이닝

# 화면 처리

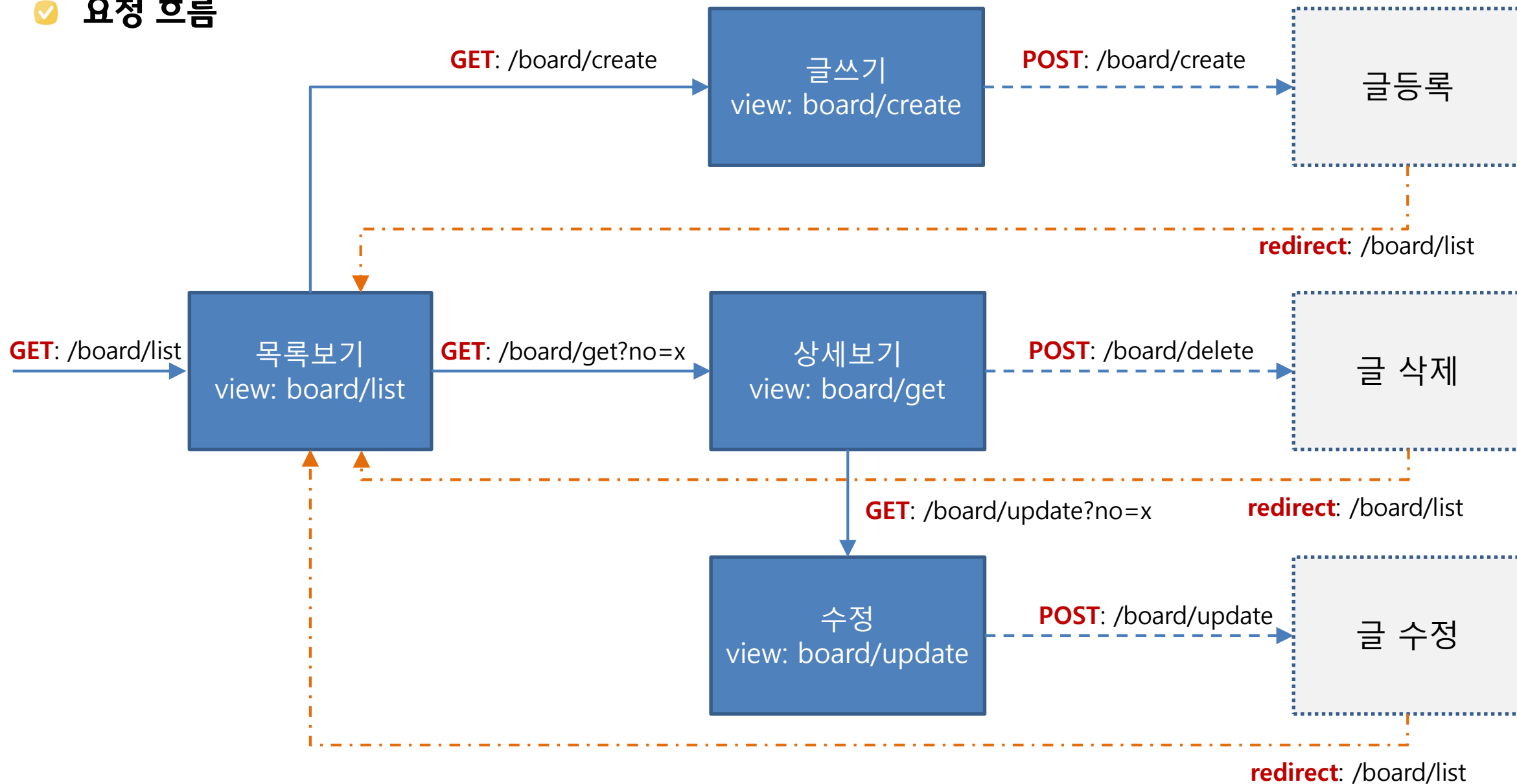
---

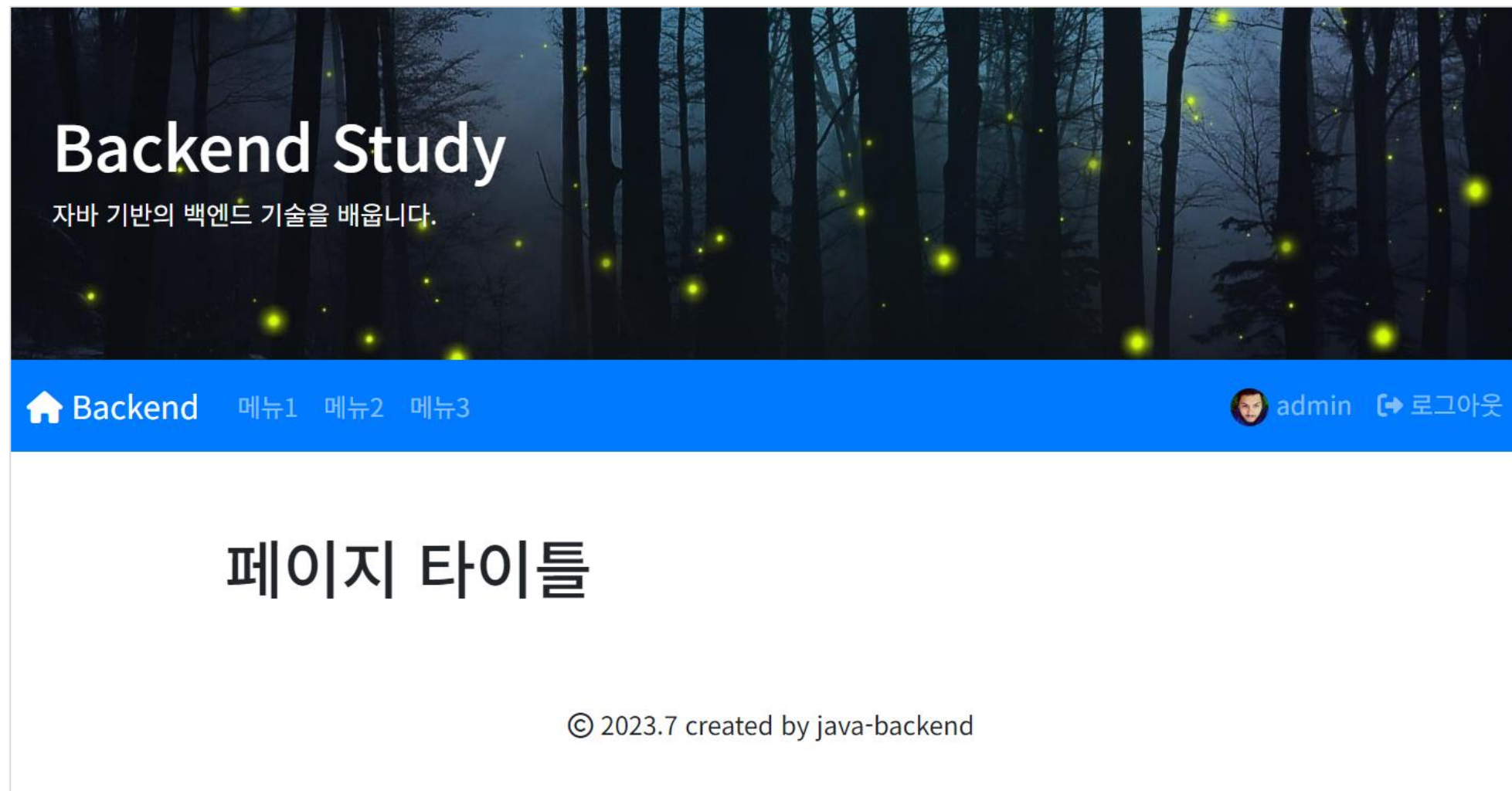
[KB] IT's Your Life

## ✔ BoardController의 분석

Task	URL	Method	Parameter	Form	URL 이동
전체 목록	/board/list	GET			
등록 처리	/board/create	POST	모든 항목	입력화면 필요	이동
조회	/board/get	GET	no=123		
수정 처리	/board/update	POST	no	입력화면 필요	이동
삭제 처리	/board/delete	POST	모든 항목	입력화면 필요	이동

## ✓ 요청 흐름





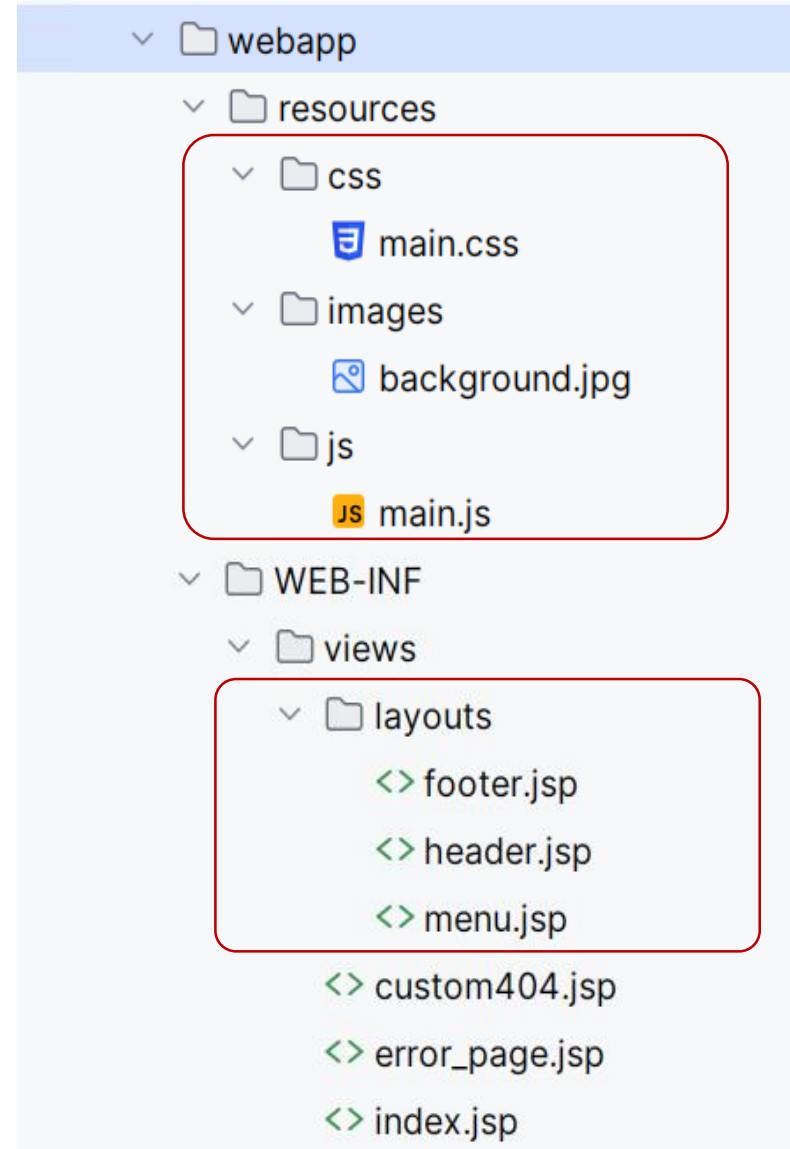
## ✓ resources/

### ○ 정적 파일 구성

- css/main.css
- images/background.jpg
- js/main.js

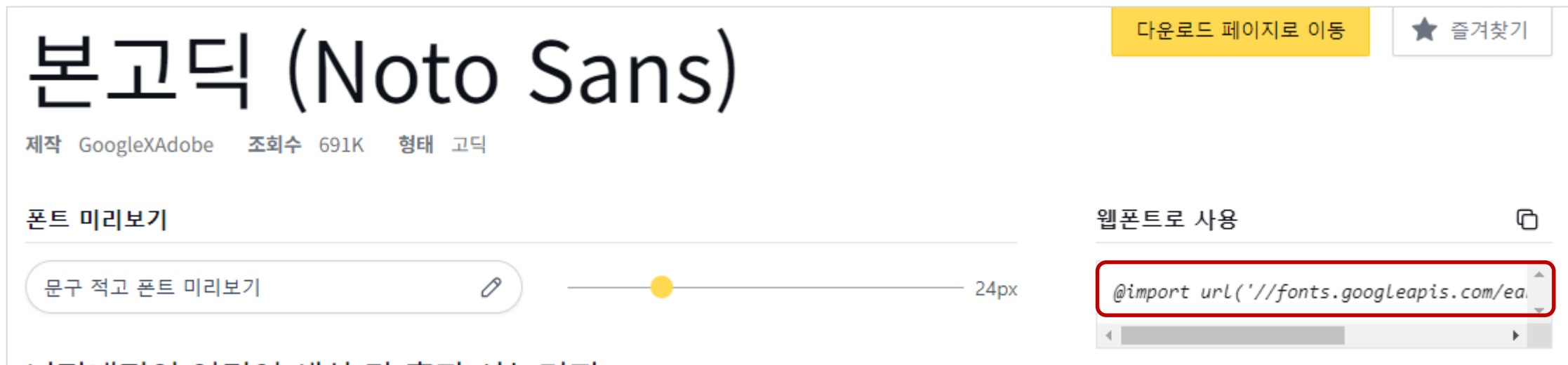
## ✓ views/layouts

- 각 페이지의 공통 부분을 독립파일로 정의
- 각 페이지에서 include로 사용
  - 코드 중복 해결
- 구성 파일
  - header.jsp
  - menu.jsp
  - footer.jsp



### ✓ webfont 설정

○ <https://noonnu.cc/> 에서 noto 검색



### webapp/resources/css/main.css

```
@import
url('https://fonts.googleapis.com/css2?family=Noto+Sans+KR:wght@100;200;300;400;500;600;700;800;900&display=swap');

* {
  font-family: 'Noto Sans KR'
}

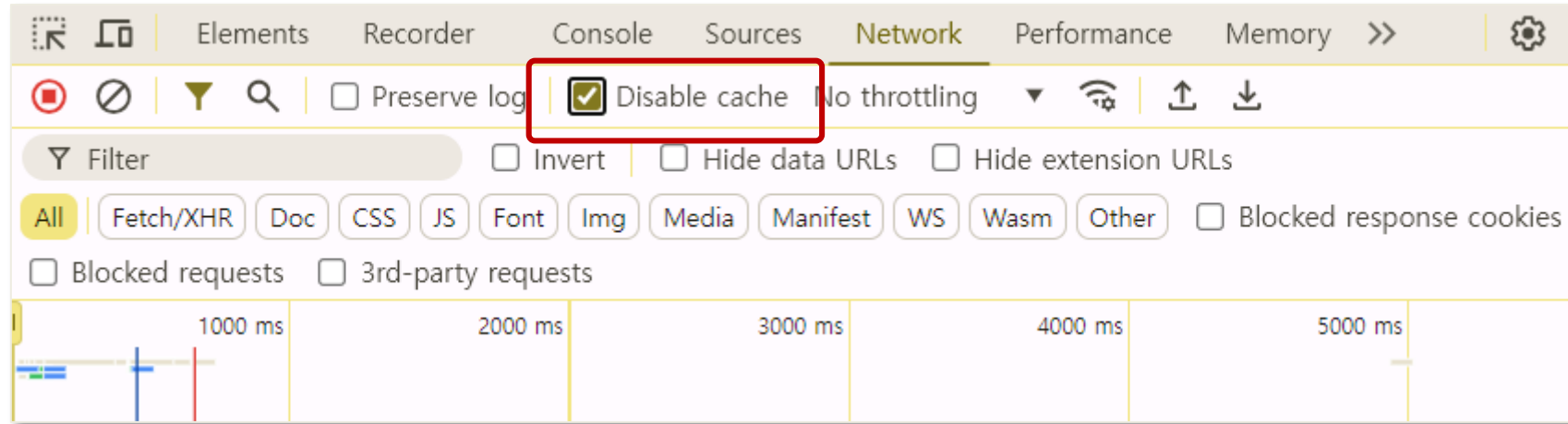
.avatar-sm {
  width: 24px;
  height: 24px;
  border-radius: 50%;
}

.jumbotron {
  background-image: url('/resources/images/background.jpg');
  background-repeat: no-repeat;
  background-position: center;
  background-size: cover;
  color: white;
  padding: 2rem;
  margin-top: 1.5rem;
}
```

## ✓ 정적 파일 캐싱 차단

### ○ 브라우저에서 정적 파일을 캐싱함

- 서버에서 css파일을 수정해도 반영 안되는 현상 발생 → 캐시 기능을 꺼야 함





 webapp/resources/js/main.js

```
// 자바 스크립트 공통 부분
```

### views/layouts/menu.jsp

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<nav class="navbar navbar-expand-md bg-primary navbar-dark sticky-top">
  <a class="navbar-brand" href="#"><i class="fa-solid fa-house"></i> Backend</a>

  <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#collapsibleNavbar">
    <span class="navbar-toggler-icon"></span>
  </button>

  <div class="collapse navbar-collapse" id="collapsibleNavbar">
    <!-- 좌측 메뉴 구성 -->
    <ul class="navbar-nav">
      <li class="nav-item">
        <a class="nav-link" href="#">메뉴1</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">메뉴2</a>
      </li>
      <li class="nav-item">
        <a class="nav-link" href="#">메뉴3</a>
      </li>
    </ul>
  </div>
</nav>
```

### views/layouts/menu.jsp

```
<!-- 우측 메뉴 -->
<ul class="navbar-nav ms-auto">
  <li class="nav-item">
    <a class="nav-link" href="#">
      
      admin
    </a>
  </li>
  <li class="nav-item">
    <a class="nav-link" href="#">
      <i class="fa-solid fa-right-from-bracket"></i> 로그아웃
    </a>
  </li>
</ul>
</div>
</nav>
```

### views/layouts/header.jsp

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<html lang="ko">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Firefly</title>

    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.0/css/all.min.css"/>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

    <link rel="stylesheet" href="/resources/css/main.css" />

    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
    <script src="/resources/js/main.js"></script>

  </head>
```

### views/layouts/header.jsp

```
<body>
  <header class="jumbotron mb-0 rounded-0">
    <h1>Backend Study</h1>
    <p>자바 기반의 백엔드 기술을 배웁니다.</p>
  </header>

  <%@ include file="menu.jsp"%>

  <div class="container my-5">
```

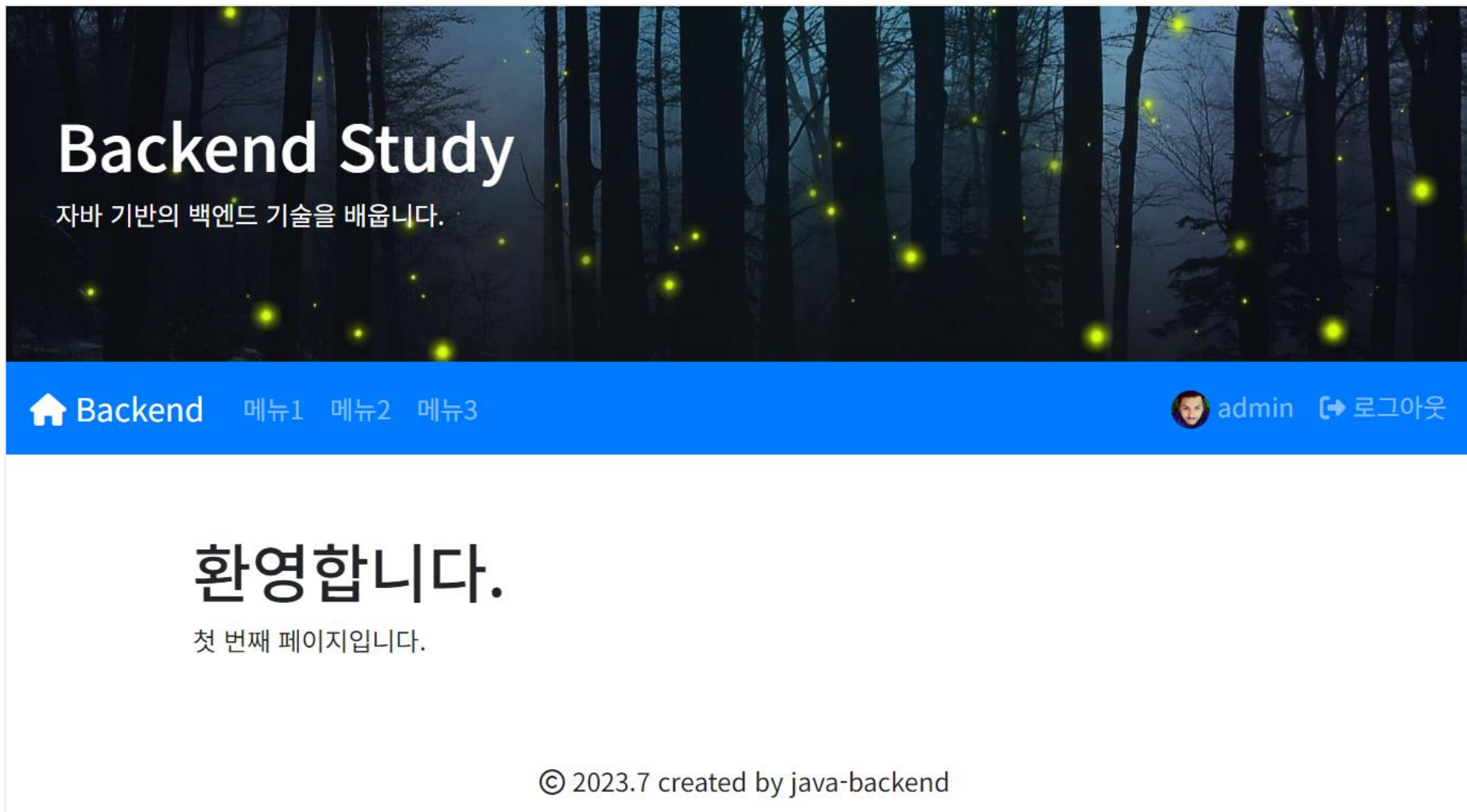
### views/layouts/footer.jsp

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
</div> <!-- end of .container -->

<footer class="text-center p-3 footer mt-5">
  <i class="fa-regular fa-copyright"></i>
  2023.7 created by java-backend
</footer>
</body>
</html>
```

### ✓ 첫 번째 페이지(홈페이지) 만들기

○ <http://localhost:8080/>



## views/index.jsp

```
<!DOCTYPE html>  
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
```

```
<%@ include file="./layouts/header.jsp" %>
```

```
<%-- 개별 페이지 --%>  
<h1>환영합니다.</h1>
```

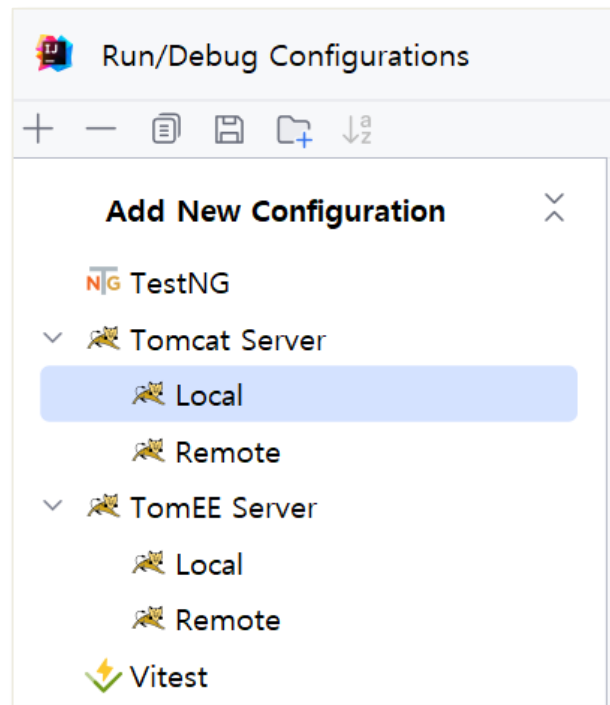
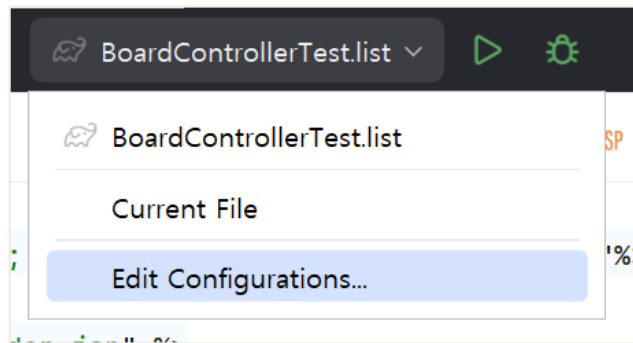
```
<div>  
    첫 번째 페이지입니다.  
</div>
```

```
<%@ include file="./layouts/footer.jsp" %>
```

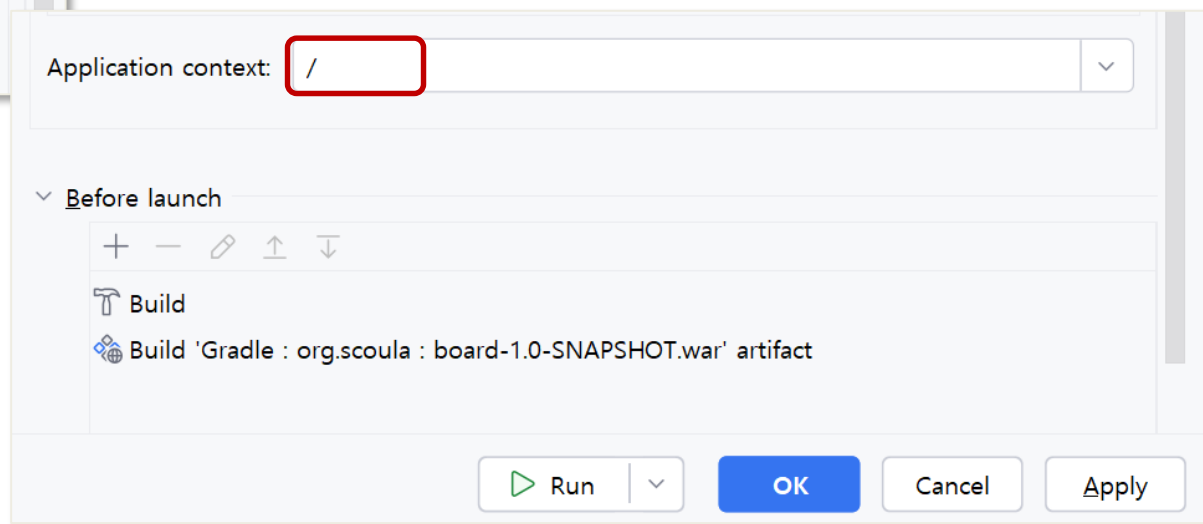
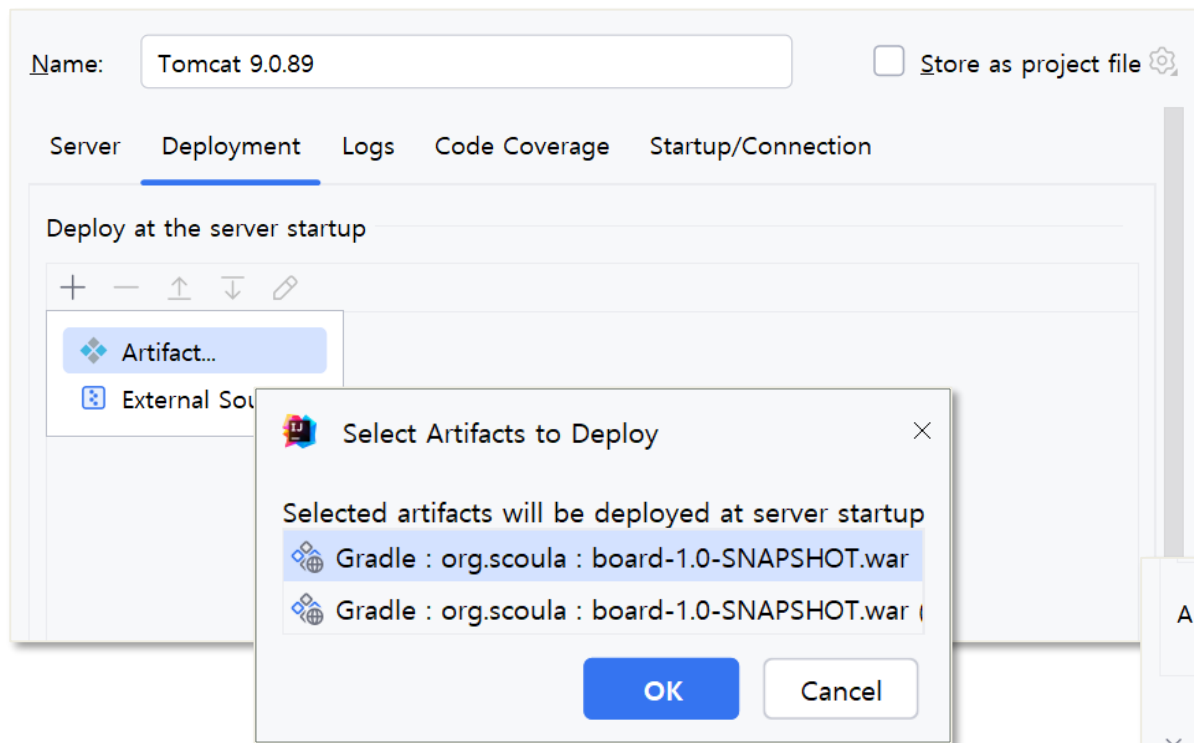
!! 상대 경로 주의



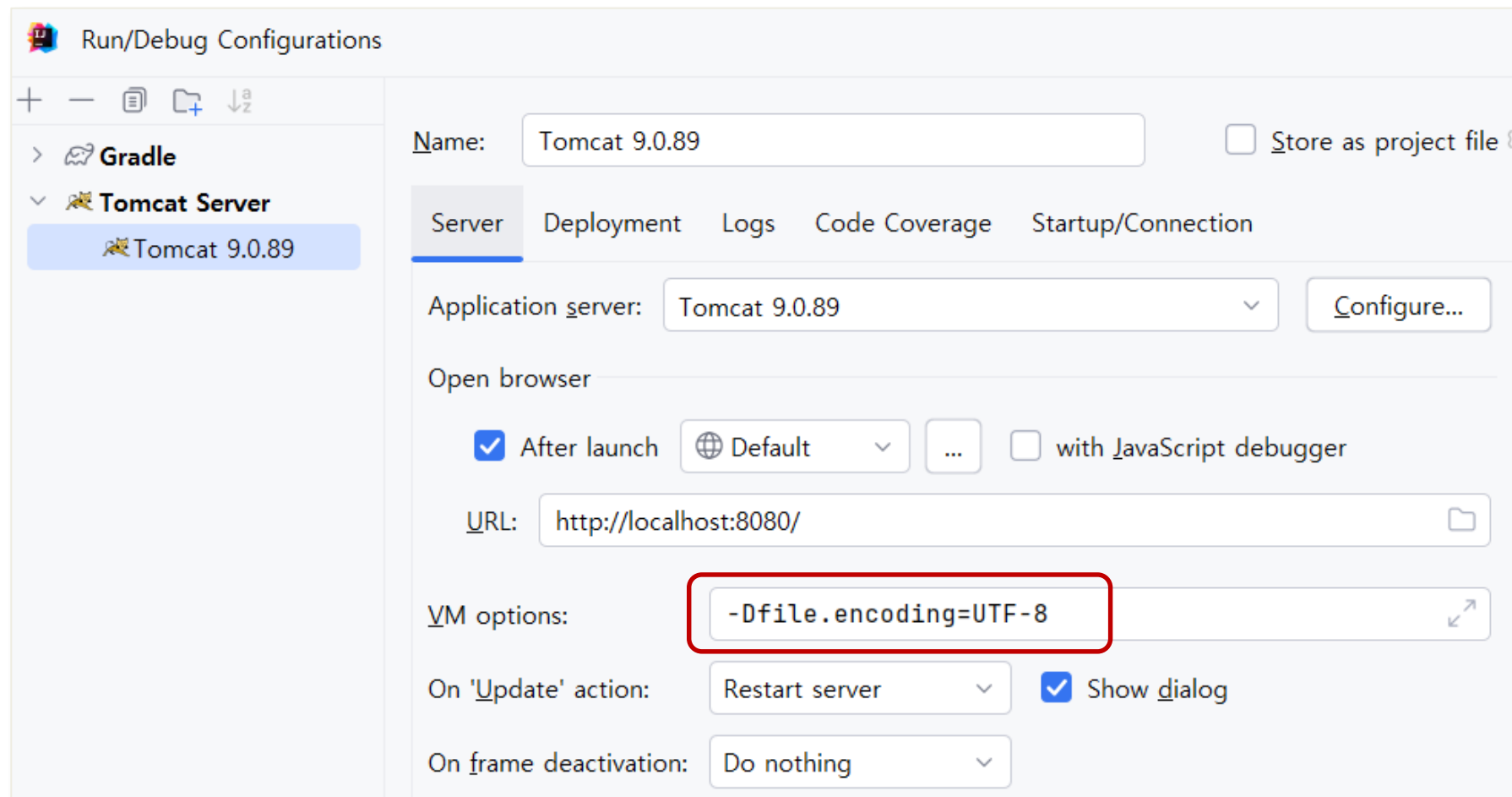
## ✓ 실행 설정



## ✓ 실행 설정



## ✓ Tomcat 한글 로그 처리



## views/board/list.jsp

```
<!DOCTYPE html>
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>

<%@ include file="../../../layouts/header.jsp" %>

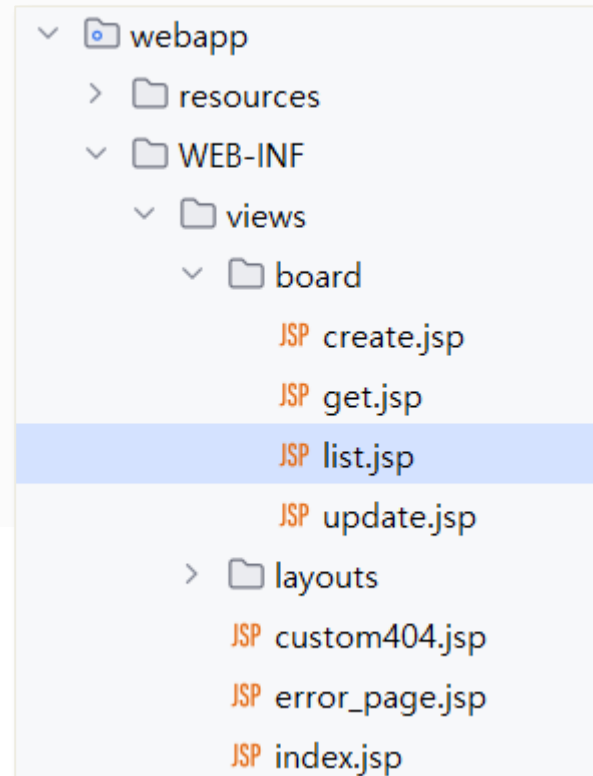
<!-- 개별 페이지 -->
<h1>목록 보기</h1>

<div>

</div>

<%@ include file="../../../layouts/footer.jsp" %>
```

!! 상대 경로 주의



### controller/HomeController.java

- 개발 편의를 위해 홈페이지를 임시로 게시판 목록 페이지로 리다이렉트

```
@Controller
@Slf4j
public class HomeController {

    @GetMapping("/")
    public String home() {
//        log.info("=====> HomController /");
//        return "index";    // View의 이름


        return "redirect:/board/list";
    }
}
```

## ✓ 목록보기

○ /board/list

## Backend Study

자바 기반의 백엔드 기술을 배웁니다.

[Backend](#) [메뉴1](#) [메뉴2](#) [메뉴3](#)  admin [로그아웃](#)

### ≡ 글 목록

No	제목	작성자	등록일
1	<a href="#">제목 수정합니다.</a>	user00	2023-11-16
2	<a href="#">테스트 제목2</a>	user00	2023-11-16
3	<a href="#">테스트 제목3</a>	user00	2023-11-16
4	<a href="#">테스트 제목4</a>	user00	2023-11-16
5	<a href="#">테스트 제목5</a>	user00	2023-11-16
6	<a href="#">새로 작성하는 글</a>	newbie	2023-11-17
7	<a href="#">테스트 새글 제목</a>	user00	2023-11-17

[글쓰기](#)

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## views/board/list.jsp

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

<!DOCTYPE html>
<%@include file="../layouts/header.jsp"%>

<h1 class="page-header my-4"><i class="fas fa-list"></i> 글 목록</h1>

<table class="table table-hover">
  <thead>
    <tr>
      <th style="width: 60px">No</th>
      <th>제목</th>
      <th style="width: 100px">작성자</th>
      <th style="width: 130px">등록일</th>
    </tr>
  </thead>
```

## views/board/list.jsp

글 목록이 담긴 속성

상세보기 링크 구성

```
public class BoardController {
    @GetMapping("/list")
    public void list(Model model) {
        model.addAttribute("list", service.getList());
    }
}
```

```
<tbody>
  <c:forEach var="board" items="${list}">
    <tr>
      <td>${board.no}</td>
      <td>
        <a href="get?no=${board.no}">${board.title}</a>
      </td>
      <td>${board.writer}</td>
      <td>
        <fmt:formatDate pattern="yyyy-MM-dd" value="${board.regDate}" />
      </td>
    </tr>
  </c:forEach>
</tbody>

</table>
```



### views/board/list.jsp

글 쓰기 링크 구성

```
<div class="text-right">
  <a href="create" class="btn btn-primary">
    <i class="far fa-edit"></i>
    글쓰기
  </a>
</div>

<%@include file="../../layouts/footer.jsp"%>
```

## ✓ 상세보기

○ /board/get?no=xxx

```
@GetMapping({ "/get", "/update" })  
public void get(@RequestParam("no") Long no, Model model) {  
  
    model.addAttribute("board", service.get(no));  
}
```

자바 기반의 백엔드 기술을 배웁니다.

Backend 메뉴1 메뉴2 메뉴3

admin 로그아웃

## 📄 테스트 제목3

user00

🕒 2023-11-16

테스트 내용3

☰ 목록

✎ 수정

🗑 삭제

## views/board/get.jsp

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

<!DOCTYPE html>
<%@include file="../layouts/header.jsp"%>

<h1 class="page-header my-4"><i class="far fa-file-alt"></i> ${board.title}</h1>

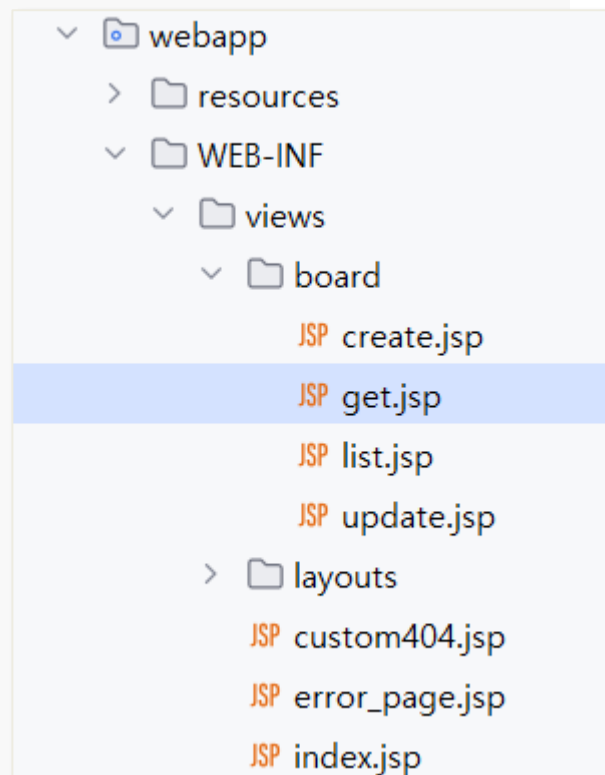
<div class="d-flex justify-content-between">
  <div><i class="fas fa-user"></i> ${board.writer}</div>
  <div>
    <i class="fas fa-clock"></i>
    <fmt:formatDate pattern="yyyy-MM-dd" value="${board.regDate}" />
  </div>
</div>

<hr>

<div>
  ${board.content}
</div>
```

```
@GetMapping({ "/get", "/update" })
public void get(@RequestParam("no") Long no,
               Model model) {

    model.addAttribute("board", service.get(no));
}
```



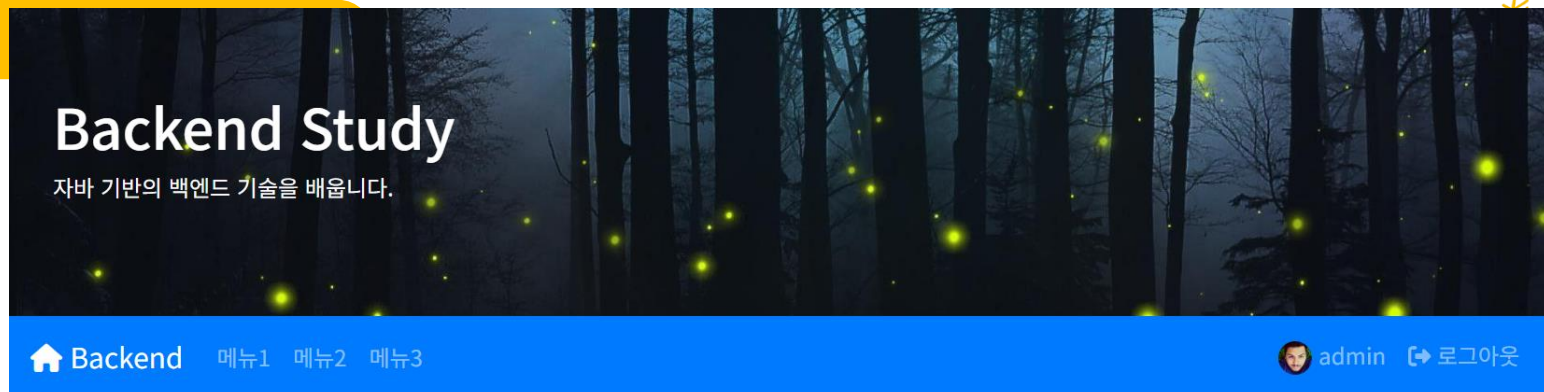
### views/board/get.jsp

```
<div class="mt-4">
  <a href="list" class="btn btn-primary"><i class="fas fa-list"></i> 목록</a>
  <a href="update?no=${board.no}" class="btn btn-primary"><i class="far fa-edit"></i> 수정</a>
  <a href="delete?no=${board.no}" class="btn btn-primary"><i class="fas fa-trash-alt"></i> 삭제</a>
</div>

<%@include file="../../layouts/footer.jsp"%>
```

### ✓ 글쓰기

○ /board/create



### ✎ 새 글쓰기

제목

작성자

내용

✓ 확인

↶ 취소

☰ 목록

## views/board/create.jsp

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

```
<!DOCTYPE html>
<%@include file="../layouts/header.jsp"%>
```

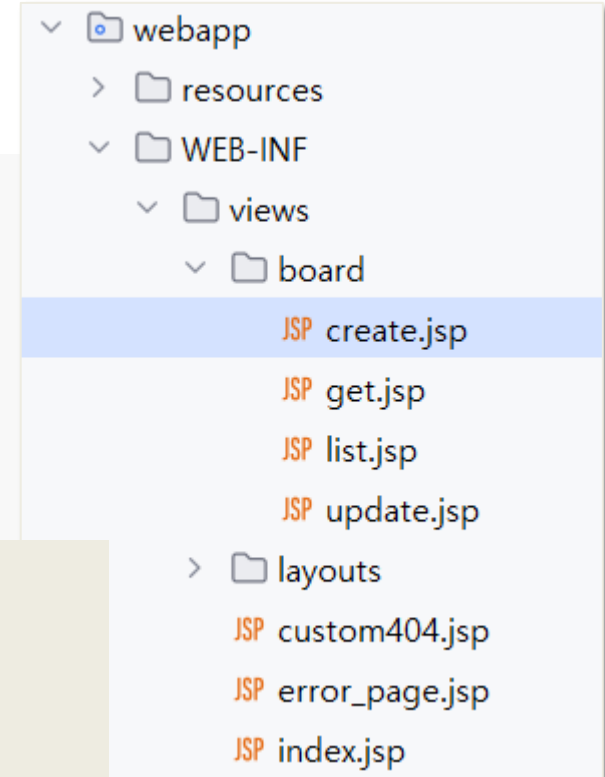
```
<h1 class="page-header my-4"><i class="far fa-edit"></i> 새 글쓰기</h1>
```

```
<div >
  <form method="post">
    <div>
      <label>제목</label>
      <input name="title" class="form-control">
    </div>

    <div>
      <label>작성자</label>
      <input name="writer" class="form-control">
    </div>
  </form>
</div>
```

```
@Data
public class BoardDTO {

    private Long no;
    private String title;
    private String writer;
    private String content;
    private Date regDate;
    private Date updateDate;
}
```



## views/board/create.jsp

```
<div>
  <label>내용</label>
  <textarea class="form-control" name="content" rows="10"></textarea>
</div>

<button type="submit" class="btn btn-primary"><i class="fas fa-check"></i> 확인</button>
<button type="reset" class="btn btn-primary"><i class="fas fa-undo"></i> 취소</button>
<a href="list" class="btn btn-primary"><i class="fas fa-list"></i> 목록</a>
</form>

</div>

<%@include file="../../layouts/footer.jsp"%>
```

```
@Data
public class BoardDTO {

  private Long no;
  private String title;
  private String writer;
  private String content;
  private Date regDate;
  private Date updateDate;
}
```

```
<insert id="create">
  insert into tbl_board (title, content, writer)
  values ({title}, {content}, {writer})

  <selectKey resultType="Long" keyProperty="no" keyColumn="no"
    order="AFTER">
    SELECT LAST_INSERT_ID()
  </selectKey>
</insert>
```

```
@PostMapping("/create")
public String create(BoardDTO board,
                    RedirectAttributes ra) {

  service.create(board);
  ra.addFlashAttribute("result", board.getNo());

  return "redirect:/board/list";
}
```

## ✓ 재전송(redirect) 처리



```
@PostMapping("/create")
public String create(BoardDTO board,
                    RedirectAttributes ra) {

    service.create(board);
    ra.addFlashAttribute("result", board.getNo());

    return "redirect:/board/list";
}
```

상태코드: 20x  
브라우저 내부에서 연속 작업으로 처리  
→ 사용자는 인지 못함



## ✓ 수정하기

○ /board/update?no=xxx

```
@GetMapping({ "/get", "/update" })  
public void get(@RequestParam("no") Long no,  
               Model model) {  
  
    model.addAttribute("board", service.get(no));  
  
}
```

Backend Study  
자바 기반의 백엔드 기술을 배웁니다.

Backend 메뉴1 메뉴2 메뉴3 admin 로그아웃

### 글 수정

제목  
테스트 제목3

작성자  
user00

내용  
테스트 내용3

✓ 확인 ↶ 취소 📄 돌아가기

## views/board/update.jsp

```
<%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/fmt" prefix="fmt"%>
<!DOCTYPE html>
<%@include file="../../layouts/header.jsp"%>
```

```
<h1 class="page-header my-4"><i class="far fa-edit"></i> 글 수정</h1>
```

```
<div>
```

```
  <form role="form" method="post" >
```

```
    <input type="hidden" name="no" value="${board.no}">
```

```
    <div >
```

```
      <label>제목</label>
```

```
      <input name="title" class="form-control" value="${board.title}">
```

```
    </div>
```

```
    <div >
```

```
      <label>작성자</label>
```

```
      <input name="writer" class="form-control" value="${board.writer}">
```

```
    </div>
```

```
    <div >
```

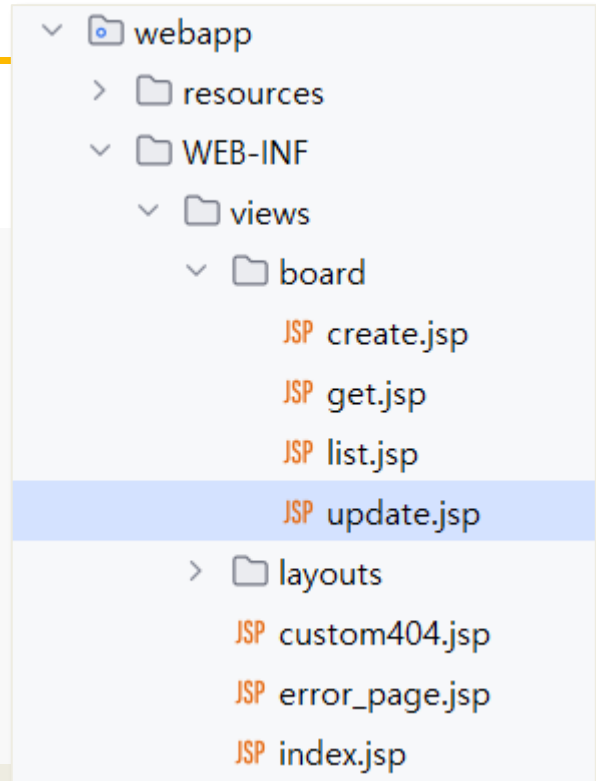
```
      <label>내용</label>
```

```
      <textarea class="form-control" name="content" rows="10">${board.content}</textarea>
```

```
    </div>
```

```
@Data
public class BoardDTO {

    private Long no;
    private String title;
    private String writer;
    private String content;
    private Date regDate;
    private Date updateDate;
}
```



## views/board/update.jsp

```
<button type="submit" class="btn btn-primary"><i class="fas fa-check"></i> 확인</button>
<button type="reset" class="btn btn-primary"><i class="fas fa-undo"></i> 취소</button>
<a href="get?no=${board.no}" class="btn btn-primary"><i class="fas fa-file-alt"></i> 돌아가기</a>
</form>
</div>

<%@include file="../../layouts/footer.jsp"%>
```

```
@PostMapping("/update")
public String update(BoardDTO board,
                    RedirectAttributes ra) {
    if (service.update(board)) {
        ra.addFlashAttribute("result", "success");
    }
    return "redirect:/board/list";
}
```

## ✓ 삭제

### ○ 삭제의 문제점

```
<a href="delete?no=${board.no}" class="btn btn-primary">  
  <i class="fas fa-trash-alt"></i> 삭제</a>
```

**a 태그를 통한 요청은 GET 요청** → 컨트롤러에서 @PostMapping으로 설정 했으므로 POST 요청을 보내야함  
숨겨진 form을 이용해서 POST 요청을 해야함

### ○ 글 삭제 전 정말 삭제할지 물어보고, 예 응답 시 실제 삭제 POST 요청 전송 → JS 처리 필요

## views/board/get.jsp

```
...
<div class="mt-4">
  <a href="list" class="btn btn-primary"><i class="fas fa-list"></i> 목록</a>
  <a href="update?no=${board.no}" class="btn btn-primary"><i class="far fa-edit"></i> 수정</a>
  <a href="#" class="btn btn-primary delete"><i class="fas fa-trash-alt"></i> 삭제</a>
</div>
```

POST :: /board/delete

```
<form action="delete" method="post" id="deleteForm">
  <input type="hidden" name="no" value="${board.no}"/>
</form>
```

```
<script src="/resources/js/board.js"></script>
```

```
<%@include file="../layouts/footer.jsp"%>
```

```
@PostMapping("/delete")
public String delete(@RequestParam("no") Long no,
                    RedirectAttributes ra) {

    if (service.delete(no)) {
        ra.addFlashAttribute("result", "success");
    }
    return "redirect:/board/list";
}
```

## resources/js/board.js

```
// 삭제 버튼의 click 이벤트 핸들러
document.querySelector('.delete').onclick = function€ {
    if(!confirm('정말 삭제할까요?')) return;
    document.getElementById('deleteForm').submit();
}
```

