6장. SpringBoard 프로젝트



메인 페이지입니다.



로그인 바로가기 글 목록 바로가기



● 프로젝트 구조도

```
▼ № > SpringBoard [springwork master]

√ ♣ > com.cloud.controller

      > 🚜 > BoardController.java
      > 🛂 > HomeController.java
      > 🛂 UserController.java
    > JDBCTest.java
      > JDBCUtil.java

→ 

⊕ > com.cloud.repository

      > 🛂 > BoardDAO.java
      > 🛂 > BoardVO.java
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      > 🛂 UserServiceImpl.java
```

```
√ № > src

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          classes
        > 🔓 > spring
        boardList.jsp
            boardView.jsp
            home.jsp
            index.jsp
            insertBoard.jsp
            login.jsp
          🛂 web.xml
```



```
-- board 테이블 생성

CREATE TABLE board(
bno NUMBER(5) PRIMARY KEY,
title VARCHAR2(200),
writer VARCHAR2(20),
content VARCHAR2(2000),
regdate DATE DEFAULT SYSDATE,
cnt NUMBER(5) DEFAULT 0
);
-- 시퀀스 : 자동 순번
CREATE SEQUENCE seq;
```

```
-- 게시글 추가
INSERT INTO board(bno, title, writer, content)
VALUES (seq.NEXTVAL, '가입인사', '관리자', '잘 부탁드립니다...');
```

```
      Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: BNO Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: BNO Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: SQL | 인출E RE SQ
```



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      Image: BNO Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: SQL | 인출E RE SQ
```



```
-- users 테이블 생성

□ CREATE TABLE users(

id VARCHAR2(8) PRIMARY KEY,

passwd VARCHAR2(8) NOT NULL,

name VARCHAR2(20) NOT NULL,

role VARCHAR2(5)

);
```

```
-- 회원 추가
INSERT INTO users VALUES ('test', 'test123', '관리자', 'Admin');
INSERT INTO users VALUES ('userl ', 'user123', '장그래', 'User');
```

```
♦ID ♦ PASSWD ♦ NAME ♠ ROLE
test test123 관리자 Admin
user1 user123 장그래 User
```



```
-- board 테이블 생성

CREATE TABLE board(
bno NUMBER(5) PRIMARY KEY,
title VARCHAR2(200),
writer VARCHAR2(20),
content VARCHAR2(2000),
regdate DATE DEFAULT SYSDATE,
cnt NUMBER(5) DEFAULT 0
);
-- 시퀀스 : 자동 순번
CREATE SEQUENCE seq;
```

```
-- 게시글 추가
INSERT INTO board(bno, title, writer, content)
VALUES (seq.NEXTVAL, '가입인사', '관리자', '잘 부탁드립니다...');
```

```
      Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: BNO Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: BNO Image: SQL | 인출된 모든 행: 1(0,06초)

      Image: SQL | 인출E RE SQ
```



● VO / DAO 만들기

```
@Setter
@Getter
public class BoardVO {
    private int bno;
    private String title;
    private String writer;
    private String content;
    @DateTimeFormat(pattern="yyyy-MM-dd")
    private Date regDate;
    private int cnt;
}
```



주소록(Address Book) 프로젝트

```
package com.common;
                                                              JDBCUtil.java
import java.sql.Connection;
public class JDBCUtil {
    private static String driverClass = "oracle.jdbc.OracleDriver";
    private static String url = "jdbc:oracle:thin:@localhost:1521:xe";
    private static String username = "c##jweb";
    private static String password = "54321";
    //DB 연결 메서드
    public static Connection getConnention() {
        try {
            Class.forName(driverClass);
            return DriverManager.getConnection(url, username, password);
        } catch (Exception e) {
            e.printStackTrace();
        return null;
```



주소록(Address Book) 프로젝트

```
//DB 연결 종료 메서드
public static void close(Connection conn, PreparedStatement pstmt) {
    if(pstmt != null) {
        try {
                                                                JDBCUtil.java
            pstmt.close();
        } catch (Exception e) {
            e.printStackTrace();
        }finally {
            pstmt = null;
    if(conn != null) {
        try {
            conn.close();
        } catch (Exception e) {
            e.printStackTrace();
        }finally {
            conn = null;
```



회원 관리형 게시판 프로젝트

```
//연결 종료(ResultSet이 있는 경우)
public static void close(Connection conn, PreparedStatement pstmt, ResultSet rs) {
   if(rs != null) {
        try {
            rs.close();
        } catch (Exception e) {
            e.printStackTrace();
   if(pstmt != null) {
       try {
            pstmt.close();
        } catch (Exception e) {
            e.printStackTrace();
        }finally {
            pstmt = null;
   if(conn != null) {
        try {
            conn.close();
        } catch (Exception e) {
            e.printStackTrace();
        }finally {
            conn = null;
```



● VO / DAO 만들기

```
@Repository
public class BoardDAO {
    private Connection conn = null;
    private PreparedStatement pstmt = null;
    private ResultSet rs = null;
    //SOL 쿼리 상수 선언
    private final String BOARD INSERT =
            "INSERT INTO board(bno, title, writer, content) VALUES "
            + "(seq.NEXTVAL, ?, ?, ?)";
    private final String BOARD LIST =
            "SELECT * FROM board ORDER BY bno DESC";
    private final String BOARD ONE =
            "SELECT * FROM board WHERE bno = ?";
    private final String BOARD UPDATE =
            "UPDATE board SET title = ?, content = ? WHERE bno = ?";
    private final String BOARD DELETE =
            "DELETE FROM board WHERE bno = ?";
```



● VO / DAO 만들기

```
//글 등록
public void insertBoard(BoardVO vo) {
    System.out.println("==> insertBoard() 기능 처리");
    try {
        conn = JDBCUtil.getConnention();
        pstmt = conn.prepareStatement(BOARD INSERT);
        pstmt.setString(1, vo.getTitle());
        pstmt.setString(2, vo.getWriter());
        pstmt.setString(3, vo.getContent());
        pstmt.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    } finally {
        JDBCUtil.close(conn, pstmt);
```



```
//글 목록
public List<BoardVO> getBoardList(){
    System.out.println("==> getBoardList() 기능 처리");
    List<BoardVO> boardList = new ArrayList<>();
    try {
        conn = JDBCUtil.getConnention();
        pstmt = conn.prepareStatement(BOARD LIST);
        rs = pstmt.executeQuery();
        while(rs.next()) {
            BoardVO vo = new BoardVO();
            vo.setBno(rs.getInt("bno"));
            vo.setTitle(rs.getString("title"));
            vo.setWriter(rs.getString("writer"));
            vo.setContent(rs.getString("content"));
            vo.setRegDate(rs.getDate("regdate"));
            vo.setCnt(rs.getInt("cnt"));
            boardList.add(vo);
    } catch (SQLException e) {
        e.printStackTrace();
    } finally {
        JDBCUtil.close(conn, pstmt, rs);
    return boardList;
```



```
//글 상세 보기
public BoardVO getBoard(int bno) {
    System.out.println("==> getBoard()");
    BoardVO board = new BoardVO();
    try {
        conn = JDBCUtil.getConnention();
        pstmt = conn.prepareStatement(BOARD ONE);
        pstmt.setInt(1, bno);
        rs = pstmt.executeQuery();
        if(rs.next()) {
            board.setBno(rs.getInt("bno"));
            board.setTitle(rs.getString("title"));
            board.setWriter(rs.getString("writer"));
            board.setContent(rs.getString("content"));
            board.setRegDate(rs.getDate("regdate"));
            board.setCnt(rs.getInt("cnt"));
    } catch (SQLException e) {
        e.printStackTrace();
    }finally {
        JDBCUtil.close(conn, pstmt, rs);
    return board;
```



```
//글 수정하기
public void updateBoard(BoardVO vo) {
    System.out.println("==> updateBoard()");
    try {
        conn = JDBCUtil.getConnention();
        pstmt = conn.prepareStatement(BOARD UPDATE);
        pstmt.setString(1, vo.getTitle());
        pstmt.setString(2, vo.getContent());
        pstmt.setInt(3, vo.getBno());
        pstmt.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    } finally {
        JDBCUtil.close(conn, pstmt);
```



● VO / DAO 만들기

```
//글 삭제
public void deleteBoard(BoardVO vo) {
    System.out.println("==> deleteBoard()");
    try {
        conn = JDBCUtil.getConnention();
        pstmt = conn.prepareStatement(BOARD_DELETE);
        pstmt.setInt(1, vo.getBno());

        pstmt.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    }
}
```



```
//조회수
public void updateCount(int bno) {
    try {
        conn= JDBCUtil.getConnention();
        String sql = "SELECT cnt FROM board WHERE bno=?";
        pstmt = conn.prepareStatement(sql);
        pstmt.setInt(1, bno);
        rs = pstmt.executeQuery();
        int cnt = 0;
        if(rs.next()) {
            cnt = rs.getInt("cnt") + 1;
        //조회수 update 쿼리
        sql = "UPDATE board SET cnt = ? WHERE bno=?";
        pstmt = conn.prepareStatement(sql);
        pstmt.setInt(1, cnt);
        pstmt.setInt(2, bno);
        pstmt.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    } finally {
        JDBCUtil.close(conn, pstmt, rs);
```



● Service 계층

```
public interface BoardService {
   public void insert(BoardVO vo); //글 쓰기
   public List<BoardVO> getBoardList(); //글 목록
   public BoardVO getBoard(int bno); //글 상세보기
   public void delete(BoardVO vo); //글 삭제
   public void update(BoardVO vo); //글 수정
   public void updateCount(int bno); //조회수
```



● Service 계층

```
@Service("boardService")
public class BoardServiceImpl implements BoardService{
    @Autowired
    private BoardDAO dao;
    @Override
    public void insert(BoardVO vo) { //글쓰기
        dao.insertBoard(vo);
    @Override
    public List<BoardVO> getBoardList() { //글 목록
        return dao.getBoardList();
    @Override
    public BoardVO getBoard(int bno) { //상세 보기
        return dao.getBoard(bno);
```



● Service 계층

```
@Override
public void delete(BoardVO vo) { //삭제
    dao.deleteBoard(vo);
@Override
public void update(BoardVO vo) { //수정
    dao.updateBoard(vo);
@Override
public void updateCount(int bno) { //조회수
    dao.updateCount(bno);
```



● Controller 계층

```
@Controller
public class HomeController {
    private static final Logger Logger = LoggerFactory.getLogger(HomeCor
    @RequestMapping(value = "/", method = RequestMethod.GET)
    public String home(Locale locale, Model model) {
        Logger.info("Welcome home! The client locale is {}.", locale);
        Date date = new Date();
        DateFormat dateFormat = DateFormat.getDateTimeInstance(DateFormat
        String formattedDate = dateFormat.format(date);
        model.addAttribute("serverTime", formattedDate );
        return "index";
```



● Controller 계층

```
@Controller
public class BoardController {
   @Autowired
    private BoardService service;
   @RequestMapping("/boardList")
    public String getBoardList(Model model) { //게시글 목록 요청
        List<BoardVO> boardList = service.getBoardList();
       model.addAttribute("boardList", boardList); //model-"boardList"
       return "boardList";
   @RequestMapping("/boardView")
    public String getBoard(int bno, Model model) { //상세 보기 요청
        service.updateCount(bno); //조회수 증가
        BoardVO board = service.getBoard(bno); //상세 보기 처리
        model.addAttribute("board", board); //model-"board"
       return "boardView";
```



```
@RequestMapping(value="/insertBoard", method=RequestMethod.GET)
public String insertBoard() { //글쓰기 폼 페이지 요청
    return "insertBoard";
/*@RequestMapping(value="/insertBoard", method=RequestMethod.POST)
public String insertBoard(HttpServletRequest request) throws Unsupported
    //사용자 입력 정보 추출
    request.setCharacterEncoding("utf-8");
    String title = request.getParameter("title");
    String writer = request.getParameter("title");
    String content = request.getParameter("content");
    //db 연동
    BoardVO vo = new BoardVO();
    vo.setTitle(title);
    vo.setWriter(writer);
    vo.setContent(content);
    boardService.insert(vo);
    return "redirect:boardList";
}*/
```



● Controller 계층

```
@RequestMapping(value="/insertBoard", method=RequestMethod.POST)
public String insertBoard(BoardVO vo){ //글쓰기 처리
   //command 객체 - BoardVO -> HttpServletRequest request 대체함
   service.insert(vo);
   return "redirect:boardList";
@GetMapping("/deleteBoard")
public String deleteBoard(BoardVO vo) { //글 삭제 요청
   service.delete(vo);
   return "redirect:boardList";
@PostMapping("/updateBoard")
public String updateBoard(BoardVO vo) { //글 수정 요청
   service.update(vo);
   return "redirect:boardList";
```



index.jsp

```
<title>Welcome~</title>
<link rel="stylesheet" href="/resources/css/style.css">
</head>
<body>
    <div id="container">
        <section id="main">
            <h2>메인 페이지입니다.</h2>
            <hr>>
            <img src="/resources/images/activity.jpg" alt="행글라이더">
            <h4>
               <a href="/login">로그인 바로가기</a>&nbsp; &nbsp; &nbsp;
               <a href="/boardList">글 목록 바로가기</a>
            </h4>
        </section>
    </div>
</body>
```



글 목록

Log-out

번호	제목	작성자	등록일	조회수
8	공지사항	관리자	2022-08-25 05:26:19	0
7	여름은 가고	한여름	2022-08-25 05:07:57	1
5	환절기 감기 조심	손흥민	2022-08-25 04:45:23	0
4	test - 수정후	관리자	2022-08-25 04:06:51	5
2	귀뚜라미	김가을	2022-08-25 03:59:38	2
1	가입인사	관리자	2022-08-25 03:30:44	0

글쓰기



```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/fmt" prefix="fmt" %>
<!DOCTYPE html>
<html>
                                                        boardList.jsp
<head>
<meta charset="UTF-8">
<title>글 목록</title>
<link rel="stylesheet" href="/resources/css/style.css">
</head>
<body>
   <div id="container">
      <section id="list">
          <h2>글 목록</h2>
          <h3>
             <a href="/logout">Log-out</a>
          </h3>
          >
                 건호
                 제목
                 작성자
                 등록일
                 조회수
```



boardList.jsp







● 한글 인코딩 처리(Filter) - web.xml

```
<!-- 한글 인코딩 필터 -->
<filter>
   <filter-name>encoding</filter-name>
    <filter-class>
       org.springframework.web.filter.CharacterEncodingFilter
    </filter-class>
    <init-param>
        <param-name>encoding</param-name>
        <param-value>UTF-8</param-value>
    </init-param>
</filter>
<filter-mapping>
    <filter-name>encoding</filter-name>
    <servlet-name>appServlet</servlet-name>
</filter-mapping>
```



```
<section id="register">
  <h2>글 등록</h2>
  <hr>>
                                             insertBoard.jsp
  <form action="/insertBoard" method="post">
     제목
          <input type="text" name="title" size="50">
        >
          >작성자
          <input type="text" name="writer">
        내용
          <textarea name="content" cols="50" rows="10"></textarea>
        <input type="submit" value="등록">
             <a href="/boardList"><input type="button" value="목록"></a>
          </form>
</section>
```







```
<section id="list">
   <h2>글 상세 보기</h2>
                                                    boardView.jsp
   <h3>
      <a href="/logout">Log-out</a>
   </h3>
   <hr>>
   <form action="/updateBoard" method="post">
   <input type="hidden" name="bno" value="${board.bno}">
      제목
            <input type="text" name="title" value="${board.title}">
         >작성자
            <input type="text" name="writer" value="${board.writer}">
         내용
            <textarea name="content" cols="62" rows="10">${board.content}</textarea></td
```



```
boardView.jsp
         <
            <input type="text" name="regDate" value="${board.regDate}">
         >조회수
            <input type="text" name="cnt" value="${board.cnt}">
         <input type="submit" value="글 수정">
               <a href="/deleteBoard?bno=${board.bno}"</pre>
                 onclick="return confirm('정말로 삭제하시겠습니까>')">
                 <input type="button" value="삭제"></a>
               <a href="/boardList"><input type="button" value="목록"></a>
            </form>
</section>
```







글 목록

test님 환영합니다... <u>Logout</u>

번호	제목	작성자	등록일	조회수
8	공지사항	관리자	2022-08-25 05:26:19	0
7	여름은 가고	한여름	2022-08-25 05:07:57	1
5	환절기 감기 조심	손흥민	2022-08-25 04:45:23	0
4	test - 수정후	관리자	2022-08-25 04:06:51	5
2	귀뚜라미	김가을	2022-08-25 03:59:38	2
1	가입인사	관리자	2022-08-25 03:30:44	0

글쓰기



● VO / DAO 만들기

```
@Getter
@Setter
public class UserVO {
    private String id;
    private String passwd;
    private String name;
    private String role;
}
```



● VO / DAO 만들기

```
@Repository
public class UserDAO {
    private Connection conn = null;
    private PreparedStatement pstmt = null;
    private ResultSet rs = null;
    private final String LOGIN =
            "SELECT * FROM users WHERE id = ? and passwd = ?";
    //로그인 처리
    public boolean login(UserVO vo) {
        try {
            conn = JDBCUtil.getConnention();
            pstmt = conn.prepareStatement(LOGIN);
            pstmt.setString(1, vo.getId());
            pstmt.setString(2, vo.getPasswd());
            rs = pstmt.executeQuery();
            if(rs.next()) {
                return true;
        } catch (SQLException e) {
            e.printStackTrace();
        } finally {
            JDBCUtil.close(conn, pstmt, rs);
        return false;
```



● VO / DAO 만들기

```
@Repository
public class UserDAO {
    private Connection conn = null;
    private PreparedStatement pstmt = null;
    private ResultSet rs = null;
    private final String LOGIN =
            "SELECT * FROM users WHERE id = ? and passwd = ?";
    //로그인 처리
    public boolean login(UserVO vo) {
        try {
            conn = JDBCUtil.getConnention();
            pstmt = conn.prepareStatement(LOGIN);
            pstmt.setString(1, vo.getId());
            pstmt.setString(2, vo.getPasswd());
            rs = pstmt.executeQuery();
            if(rs.next()) {
                return true;
        } catch (SQLException e) {
            e.printStackTrace();
        } finally {
            JDBCUtil.close(conn, pstmt, rs);
        return false;
```



● Service 계층

```
import com.cloud.repository.UserVO;
public interface UserService {
    public boolean login(UserVO vo); //로그인 처리
}
```



● Service 계층

```
@Service
public class UserServiceImpl implements UserService{

    @Autowired
    private UserDAO dao;

    @Override
    public boolean login(UserVO vo) {
        return dao.login(vo);
    }
}
```



● Controller 계층

```
@Controller
public class UserController{
   @Autowired
    private UserService service;
   @RequestMapping(value="/login", method=RequestMethod.GET)
    public String loginView() { //로그인 폼 페이지 요청
        return "login";
   @RequestMapping(value="/login", method=RequestMethod.POST)
    public String login(UserVO vo, HttpSession session) { //로그인 처리 요청
        boolean result = service.login(vo);
        if(result) {
            session.setAttribute("sessionId", vo.getId()); //세션 발급
            return "redirect:boardList";
        }else {
            return "login";
```



● Controller 계층

```
@GetMapping("/logout")
public String logout(HttpSession session) { //로그 아웃 처리 요청
session.invalidate(); //세션 삭제
return "index";
}
```



```
<title>로그인</title>
<link rel="stylesheet" href="/resources/css/style.css">
<script>
                                                         login.jsp
   function checkForm(){
       let form = document.login
       if(form.id.value == ""){
            alert("아이디를 입력해주세요");
           form.id.focus();
           return false;
        if(form.passwd.value == ""){
            alert("비밀번호를 입력해주세요");
           form.passwd.focus();
            return false;
        }
</script>
</head>
```



```
<div id="container">
   <section id="login">
                                              login.jsp
      <h2>로그인</h2>
      <form action="/login" method="post"</pre>
          name="login" onsubmit="return checkForm()">
         >
               아이디
               <input type="text" name="id">
            >
               >비밀번호
               <input type="password" name="passwd">
            <button type="submit">로그인</button>
            </form>
   </section>
</div>
```



boardList.jsp







```
@RequestMapping(value="/login", method=RequestMethod.POST)
public String login(UserVO vo, HttpSession session, Model model) { //로그인
    boolean result = service.login(vo);
    System.out.println(result);
    if(result==true) {
        session.setAttribute("sessionId", vo.getId()); //세션 발급
        return "redirect:boardList";
    }else {
        int error = 1;
        model.addAttribute("error", error);
        return "login";
    }
}
```

