

```
create table Book
(
    book_id int,
    title char(20),
    author char(20),
    price int,
    primary key (book_id)
);
```

```
package bookstore;
```

```
public class Book {

    private int id;

    private String title;

    private String author;

    private float price;

    public Book() {

    }

    public Book(int id) {

        this.id = id;

    }

    public Book(String title, String author, float price) {

        this.title = title;

        this.author = author;

        this.price = price;

    }

    public Book(int id, String title, String author, float price) {

        this.id = id;
```

```
        this.title = title;

        this.author = author;

        this.price = price;
    }
}
```

```
public int getId() {
    return id;
}
```

```
public void setId(int id) {
    this.id = id;
}
```

```
public String getTitle() {
    return title;
}
```

```
public void setTitle(String title) {
    this.title = title;
}
```

```
public String getAuthor() {
    return author;
}
```

```
public void setAuthor(String author) {
    this.author = author;
}
```

```
public float getPrice() {
    return price;
}
```

```
public void setPrice(float price) {
    this.price = price;
}
```

```
}
```

```
package bookstore;
```

```
import java.sql.Connection;
```

```
import java.sql.DriverManager;
```

```
import java.sql.PreparedStatement;
```

```
import java.sql.ResultSet;
```

```
import java.sql.SQLException;
```

```
import java.sql.Statement;
```

```
import java.util.ArrayList;
```

```
import java.util.List;
```

```
public class BookDao {
```

```
    private String url;
```

```
    private String username;
```

```
    private String password;
```

```
    private Connection connection;
```

```
    public BookDao(String url, String username, String password) {
```

```
        super();
```

```
        this.url = url;
```

```
        this.username = username;
```

```
        this.password = password;
```

```
    }
```

```
    public void connect () throws SQLException {
```

```
        if (connection==null || connection.isClosed()) {
```

```
            try {
```

```
                Class.forName("com.mysql.jdbc.Driver");
```

```
            } catch(ClassNotFoundException e) {
```

```
                throw new SQLException (e);
```

```
        }  
        connection = DriverManager.getConnection(url, username,  
password);
```

```
    }  
}
```

```
public void disconnect () throws SQLException {  
    if (connection!=null && !connection.isClosed()) {  
        connection.close();  
    }  
}
```

```
public boolean insertBook(Book book) throws SQLException {  
    String sql = "INSERT INTO book (title, author, price) VALUES (?, ?, ?)";  
    connect();  
  
    PreparedStatement statement = connection.prepareStatement(sql);  
    statement.setString(1, book.getTitle());  
    statement.setString(2, book.getAuthor());  
    statement.setFloat(3, book.getPrice());  
  
    boolean rowInserted = statement.executeUpdate() > 0;  
    statement.close();  
    disconnect();  
    return rowInserted;  
}
```

```
public List<Book> listAllBooks() throws SQLException {  
    List<Book> listBook = new ArrayList<>();  
  
    String sql = "SELECT * FROM book";
```

```
connect();
```

```
Statement statement = connection.createStatement();
```

```
ResultSet resultSet = statement.executeQuery(sql);
```

```
while (resultSet.next()) {
```

```
    int id = resultSet.getInt("book_id");
```

```
    String title = resultSet.getString("title");
```

```
    String author = resultSet.getString("author");
```

```
    float price = resultSet.getFloat("price");
```

```
    Book book = new Book(id, title, author, price);
```

```
    listBook.add(book);
```

```
}
```

```
resultSet.close();
```

```
statement.close();
```

```
disconnect();
```

```
return listBook;
```

```
}
```

```
public boolean deleteBook(Book book) throws SQLException {
```

```
    String sql = "DELETE FROM book where book_id = ?";
```

```
connect();
```

```
PreparedStatement statement = connection.prepareStatement(sql);
```

```
statement.setInt(1, book.getId());
```

```

        boolean rowDeleted = statement.executeUpdate() > 0;

        statement.close();

        disconnect();

        return rowDeleted;
    }

    public boolean updateBook(Book book) throws SQLException {

        String sql = "UPDATE book SET title = ?, author = ?, price = ?";

        sql += " WHERE book_id = ?";

        connect();

        PreparedStatement statement = connection.prepareStatement(sql);

        statement.setString(1, book.getTitle());

        statement.setString(2, book.getAuthor());

        statement.setFloat(3, book.getPrice());

        statement.setInt(4, book.getId());

        boolean rowUpdated = statement.executeUpdate() > 0;

        statement.close();

        disconnect();

        return rowUpdated;
    }

    public Book getBook(int id) throws SQLException {

        Book book = null;

        String sql = "SELECT * FROM book WHERE book_id = ?";

        connect();

        PreparedStatement statement = connection.prepareStatement(sql);

```

```

        statement.setInt(1, id);

        ResultSet resultSet = statement.executeQuery();

        if (resultSet.next()) {
            String title = resultSet.getString("title");
            String author = resultSet.getString("author");
            float price = resultSet.getFloat("price");

            book = new Book(id, title, author, price);
        }

        resultSet.close();
        statement.close();
        disconnect();
        return book;
    }

}

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html>

    <head>

        <meta http-equiv="Content-Type" content="text/html; charset=ISO-
8859-1">

        <title>Book Store Title</title>
    </head>
    <body>
        <center>

```

Book

```
<h1>Books Management</h1>

<h2>

<a href = "ControllerServlet?action=new">Add New

List All Book</a>

</h2>

</center>

<div align=center>

<table border="1" cellpadding="5">

    <caption><h2>List of Books</h2></caption>

    <tr>

        <th>Id</th>

        <th>Title</th>

        <th>Author</th>

        <th>Price</th>

        <th>Actions</th>

    </tr>

    <c:forEach items="${listBook}" var="book">

        <tr>

            <td><c:out value="${book.id}"/></td>

            <td><c:out value="${book.title}"/></td>

            <td><c:out value="${book.author}"/></td>

            <td><c:out value="${book.price}"/></td>

            <td>

                <a

href="ControllerServlet?action=edit&id=<c:out value='${book.id}'/">Edit</a>

                <a

href="ControllerServlet?action=delete&id=<c:out value='${book.id}'/">Delete</a>

            </td>

        </tr>

    </c:forEach>

</table>
```


</div>

</body>

</html>