Configuration file

```java
package com.simplilearn.demo;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
import java.util.Properties;

public class DBConfig {
	public static Connection getConnection(Properties props) {
		Connection conn = null;
		String driver = props.getProperty("driver");
		String url = props.getProperty("url");
		String username = props.getProperty("username");
		String password = props.getProperty("password");
		try {
			Class.forName(driver);
			conn = DriverManager.getConnection(url, username, password);
		} catch (Exception e) {
			// TODO Auto-generated catch block
			e.printStackTrace();
		}
		return conn;
	}
}
```

Search Servlet

```java
package com.simplilearn.demo;

import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Properties;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
```

```java
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/flightSearch")
public class searchFlight extends HttpServlet{

        @Override
        protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
                Properties props = new Properties();
                InputStream in = getServletContext().getResourceAsStream("/WEB-
INF/application.properties");
                props.load(in);
                Connection conn = DBConfig.getConnection(props);
                resp.setContentType("text/html");

                PrintWriter out = resp.getWriter();

                int passenger = Integer.parseInt(req.getParameter("numPassengers"));
                String from = req.getParameter("originCity");
                String to = req.getParameter("destCity");
                String date = req.getParameter("date");

                if(conn!=null) {
                        try {
                                out.print("Connection Established!");
                                String sql = "SELECT * FROM flightList WHERE origin = ? AND
destination = ?";

                                PreparedStatement stmt = conn.prepareStatement(sql);

                                stmt.setString(1, from);
                                stmt.setString(2, to);

                                ResultSet result = stmt.executeQuery();

                                if(result.next() && passenger>0) {
                                        out.println("<center> <span style='color:green'><br>
Following flight(s) are availabe on: " + date + "</span></center>");
                                        do {
                                                out.print("<br>" + "|> " + result.getString(2) + "
>>>>> " + result.getString(3) + ", Departure: " + result.getString(4) + ", Arrival: "

        + result.getString(5) + ", Rs. " + result.getInt(6) + "  " + "<a
href=\"passengerInfo.jsp?numPassengers=" + passenger +"&flightId=" + result.getInt(1) +
"\">Click to book</a>" + "<br>" );
```

```
                    }while(result.next());

                }else {
                        out.print("No flight found!");
                }

            } catch (SQLException e) {
                    // TODO Auto-generated catch block
                    e.printStackTrace();
            }
        }
    }

    @Override
    protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
            doGet(req, resp);

    }
}
```

Passenger Servlet

```
package com.simplilearn.demo;
import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;
import java.util.List;
import java.util.Properties;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
@WebServlet("/PassengerServlet")
public class PassengerServlet extends HttpServlet{
@Override
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
int numPassengers = Integer.parseInt(request.getParameter("numPassengers"));
```

```java
int flightId = Integer.parseInt(request.getParameter("flightId"));
PrintWriter out = response.getWriter();
List<Passenger> passengers = new ArrayList<>();
for(int i =1; i <= numPassengers; i++) {
String name = request.getParameter("name" + i);
int age = Integer.parseInt(request.getParameter("age" + i));
Passenger passenger = new Passenger(name, age);
passengers.add(passenger);
}
//Connection to the database
Properties props = new Properties();
InputStream in = getServletContext().getResourceAsStream("/WEB-
INF/application.properties");
props.load(in);
Connection conn = DBConfig.getConnection(props);
response.setContentType("text/html");
PreparedStatement stmt = null;
ResultSet rs = null;
float price = 0.0f;
float totalPrice = 0.0f;
String departureAirport = null;
String arrivalAirport = null;
String departureTime = null;
String arrivalTime = null;
String date = null;
try {
// Prepare SQL query to retrieve the price of the flight
stmt = conn.prepareStatement("SELECT price, origin, destination, departure_time,
arrival_time FROM flightList WHERE id = ?");
stmt.setInt(1, flightId);
// Execute the query and retrieve the result set
rs = stmt.executeQuery();
// Extract the price of the flight from the result set
if (rs.next()) {
price = rs.getFloat("price");
departureAirport = rs.getString("origin");
arrivalAirport = rs.getString("destination");
departureTime = rs.getString("departure_time");
arrivalTime = rs.getString("arrival_time");
}
// Calculate the total price for the booking
totalPrice = numPassengers * price;
//out.print(totalPrice);
// Set the numPassengers and totalPrice as attributes of the request object
request.setAttribute("numPassengers", numPassengers);
request.setAttribute("totalPrice", totalPrice);
request.setAttribute("price", price);
```

```java
request.setAttribute("flightId", flightId);
request.setAttribute("passengers", passengers);
request.setAttribute("departureAirport", departureAirport);
request.setAttribute("arrivalAirport", arrivalAirport);
request.setAttribute("departureTime", departureTime);
request.setAttribute("arrivalTime", arrivalTime);
// Forward the request to the payment JSP page
request.getRequestDispatcher("payment.jsp").forward(request, response);
//request.getRequestDispatcher("Ticket.jsp").forward(request, response);
response.sendRedirect("Ticket.jsp");
}catch (SQLException e) {
e.printStackTrace();
} finally {
try {
// Close the result set, statement and connection
if (rs != null) rs.close();
if (stmt != null) stmt.close();
if (conn != null) conn.close();
} catch (SQLException e) {
e.printStackTrace();
}
}
}
}
```

Admin Login

```java
package com.simplilearn.demo;

import java.io.IOException;
import java.io.PrintWriter;

import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * Servlet implementation class LoginController
 */
@WebServlet("/LoginController")
public class LoginController extends HttpServlet {
        private static final long serialVersionUID = 1L;
```

```java
    /**
     * @see HttpServlet#HttpServlet()
     */
    public LoginController() {
        super();
        // TODO Auto-generated constructor stub
    }

        /**
         * @see HttpServlet#service(HttpServletRequest request, HttpServletResponse response)
         */
        protected void service(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
                String username = request.getParameter("username");
                String password = request.getParameter("password");
                response.setContentType("text/html");
                PrintWriter out = response.getWriter();
                RequestDispatcher rd = null;
                if(username.equalsIgnoreCase("Admin") && password.equals("password")) {
                        rd = request.getRequestDispatcher("admin.html");
                        out.println("<center> <span style='color:red'> Welcome Admin, Login
Successful!</span></center>");
                        rd.include(request, response);
                } else {
                        rd = request.getRequestDispatcher("login.html");
                        rd.include(request, response);
                        out.println("<center> <span style='color:red'> Invalid Credentials!!
</span></center>");
                }
        }

}
```

CRUD Servlets

Create

```java
package com.simplilearn.demo;

import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
```

```java
import java.sql.SQLException;
import java.sql.Time;
import java.text.ParseException;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.Properties;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/save")
public class SaveServlet extends HttpServlet{

	@Override
	protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
			Properties props = new Properties();
			InputStream in = getServletContext().getResourceAsStream("/WEB-
INF/application.properties");
			props.load(in);
			Connection conn = DBConfig.getConnection(props);
			resp.setContentType("text/html");

			PrintWriter out = resp.getWriter();
			String from = req.getParameter("From");
			String to = req.getParameter("To");
			String depTimeStr = req.getParameter("Departure_Time");
			String arrTimeStr = req.getParameter("Arrival_Time");
			int price = Integer.parseInt(req.getParameter("Price"));


			if(conn!=null) {
				try {
					out.print("<center> <span style='color:blue'><h3>Connection
Established!<h3></center></span>");
					String sql = "INSERT INTO flightList(origin, destination,
departure_time, arrival_time, price) VALUES (?, ?, ?, ?, ?)";
					PreparedStatement stmt = conn.prepareStatement(sql);
					stmt.setString(1, from);
					stmt.setString(2, to);
					stmt.setString(3, depTimeStr);
					stmt.setString(4, arrTimeStr);
					stmt.setInt(5, price);
					int rowsInserted = stmt.executeUpdate();
```

```java
                    if(rowsInserted > 0) {
                            System.out.println("A new flight has been added to the
database.");

                            out.println("<center> <span style='color:red'><br><h3>
A new flight has been added to the database <h3></span></center>");
                    }else {
                            out.print("<center> <span style='color:red'><br> Error!
</span></center>");
                    }

            } catch (SQLException e) {
                    // TODO Auto-generated catch block
                    e.printStackTrace();
            }
    }

    }

    @Override
    protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
            doGet(req, resp);
            //resp.sendRedirect("index.html");
    }

}
```

Retrieve

```java
package com.simplilearn.demo;

import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Properties;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```java
@WebServlet("/fetch")
public class fetchServlet extends HttpServlet{

	@Override
	protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
		Properties props = new Properties();
		InputStream in = getServletContext().getResourceAsStream("/WEB-INF/application.properties");
		props.load(in);
		Connection conn = DBConfig.getConnection(props);
		resp.setContentType("text/html");

		PrintWriter out = resp.getWriter();

		if(conn!=null) {
			try {
				out.print("<center> <span style='color:blue'><h3>Connection Established!<h3></span></center>");
				Statement stmt = conn.createStatement();
				ResultSet result = stmt.executeQuery("SELECT * FROM flightList");

				while(result.next()) {
					out.print("<br>" + result.getInt(1) + ".   " + result.getString(2) + " >>>>> " + result.getString(3) + ", " + result.getString(4) + ", "
							+ result.getString(5) + ", Rs. " + result.getInt(6) + "<br>");
				}
			} catch (SQLException e) {
				// TODO Auto-generated catch block
				e.printStackTrace();
			}
		}
	}

	@Override
	protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException {
		doGet(req, resp);
	}
}
```

Update

package com.simplilearn.demo;

```java
import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.Properties;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/update")
public class UpdateServlet extends HttpServlet{

    @Override
    protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
        Properties props = new Properties();
        InputStream in = getServletContext().getResourceAsStream("/WEB-
INF/application.properties");
        props.load(in);
        Connection conn = DBConfig.getConnection(props);
        resp.setContentType("text/html");

        PrintWriter out = resp.getWriter();
        int id = Integer.parseInt(req.getParameter("id"));
        String from = req.getParameter("From");
        String to = req.getParameter("To");
        String depTimeStr = req.getParameter("Departure_Time");
        String arrTimeStr = req.getParameter("Arrival_Time");
        int price = Integer.parseInt(req.getParameter("Price"));

        if(conn!=null) {
            try {
                out.print("Connection Established!");
                String sql = "UPDATE flightList SET origin = ?, destination = ?,
departure_time = ?, arrival_time = ?, price = ? WHERE id = ?";
                PreparedStatement stmt = conn.prepareStatement(sql);
                stmt.setString(1, from);
                stmt.setString(2, to);
                stmt.setString(3, depTimeStr);
                stmt.setString(4, arrTimeStr);
                stmt.setInt(5, price);
                stmt.setInt(6,  id);
```

```java
                                int rowsInserted = stmt.executeUpdate();
                                if(rowsInserted > 0) {
                                        System.out.println("FlightList has been Updated.");
                                        out.println("<center> <span style='color:red'><br>
FlightList has been Updated! </span></center>");
                                }else {
                                        out.print("Data not added");
                                }

                        } catch (SQLException e) {
                                // TODO Auto-generated catch block
                                e.printStackTrace();
                        }
                }
        }

        @Override
        protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
                doGet(req, resp);
        }
}
```

Delete Servlet

```java
package com.simplilearn.demo;

import java.io.IOException;
import java.io.InputStream;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import java.util.Properties;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/delete")
public class deleteServlet extends HttpServlet{

        @Override
        protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
```

```java
            Properties props = new Properties();
            InputStream in = getServletContext().getResourceAsStream("/WEB-
INF/application.properties");
            props.load(in);
            Connection conn = DBConfig.getConnection(props);
            resp.setContentType("text/html");

            PrintWriter out = resp.getWriter();
            int id = Integer.parseInt(req.getParameter("id"));

            if(conn!=null) {
                    try {
                            out.print("<center> <span style='color:blue'><h3>Connection
Established!<h3></span></center>");
                            String sql = "DELETE FROM flightList where id = ?";
                            PreparedStatement stmt = conn.prepareStatement(sql);
                            stmt.setInt(1,  id);
                            int rowsInserted = stmt.executeUpdate();
                            if(rowsInserted > 0) {
                                    System.out.println("FlightList has been Updated.");
                                    out.println("<center> <span style='color:red'><br>
<h3>Flight removed from list! <h3></span></center>");
                            }else {
                                    out.print("Data not added");
                            }

                    } catch (SQLException e) {
                            // TODO Auto-generated catch block
                            e.printStackTrace();
                    }
            }
    }

    @Override
    protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
            doGet(req, resp);
    }

}
```

Index.html

```html
<!DOCTYPE html>
<html>
<head>
```

```html
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<div align="center">
<h1>FlyAway Flights</h1>
<form action="flightSearch" method="post"/>
Origin: <input type="text" name="originCity" placeholder="Enter origin city"/><br/>
Destination: <input type="text" name="destCity" placeholder="Enter destination city"/><br/>
Date: <input type="date" name="date" placeholder="Enter date"/></br>
Passengers: <input type="number" name="numPassengers" placeholder="Enter number of passenger"/><br>
<input type="submit" name="Search"/>
</form>
</div>
<a href="login.html">Click here for admin login</a>
</body>
</html>
```

PassengerInfo.jsp

```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>
<h1>Enter Passenger Information</h1>
<%
int flightId = Integer.parseInt(request.getParameter("flightId"));
int numPassengers = Integer.parseInt(request.getParameter("numPassengers")); %>
<form method="post"
action="PassengerServlet?numPassengers=<%=numPassengers%>&flightId=<%=flightId%>"
>
<%
for(int i = 1; i <= numPassengers; i++){
%>
<fieldset>
<legend>Passenger <%= i %> Information</legend>
Name: <input type="text" name="name<%=i %>" required><br>
Age: <input type="number" name="age<%=i %>" required><br>
</fieldset>
```

```
<%
}
%>
<input type="submit" value="Submit">
</form>
</body>
</html>
```

Payment.jsp

```jsp
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Payment Page</title>
</head>
<body>
<h1>Payment Details</h1>
<form method="post" action="Ticket.jsp">
<label for="price">Passengers:</label>
<input type="text" id="numPassengers" name="numPassengers" readonly="readonly"
value="${numPassengers}" /><br />
<label for="price">Price:</label>
<input type="text" id="price" name="price" readonly="readonly" value="${price}" /><br />
<label for="price">Total Price:</label>
<input type="text" id="totalPrice" name="totalPrice" readonly="readonly"
value="${totalPrice}" /><br />
<label for="name">Name on Card:</label>
<input type="text" id="name" name="name" required /><br />
<label for="cardNumber">Card Number:</label>
<input type="text" id="cardNumber" name="cardNumber" /><br />
<label for="expiryMonth">Expiration Month:</label>
<input type="text" id="expiryMonth" name="expiryMonth" /><br />
<label for="expiryYear">Expiration Year:</label>
<input type="text" id="expiryYear" name="expiryYear" /><br />
<label for="cvv">CVV:</label>
<input type="text" id="cvv" name="cvv" /><br />
<label for="address">Billing Address:</label>
<textarea id="address" name="address" ></textarea><br />
<input type="submit" value="Pay Now" />
</form>
</body>
</html>
```

Ticket.jsp

```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>
<h1>Thank you for booking with us!</h1>
<h2>Flight Details</h2>
<p>Flight ID: ${flightId}</p>
<p>From: ${departureAirport}</p>
<p>To: ${arrivalAirport}</p>
<p>Departure Time: ${departureTime}</p>
<p>Arrival Time: ${arrivalTime}</p>
<p>Total Price: ${price*numPassengers}</p>
<h2>Passenger Details</h2>
<p><b>${passengers.toString()}</b></p>
</body>
</html>
```

Admin Login

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<div align="center">
<h2>Admin Login</h2>
<form action="LoginController" method="post">
Enter Username: <input type="text" name="username"/><br/>
Enter Password: <input type="password" name="password"/><br/>
<input type="submit" name="Login"/>
</form>
</div>
</body>
</html>
```

CRUD Page

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>FlyAway</title>
</head>
<body>
<h1><b>FlyAway</b> Admin Access Portal </h1>
<br>
<h2>Add a flight to flightList</h2>
<form action="save" method="post">
From: <input type="text" name="From" placeholder="Enter a city"><br>
To: <input type="text" name="To" placeholder="Enter a city"><br>
Departure Time: <input type="time" name="Departure_Time" placeholder="Enter departure time"><br>
Arrival Time: <input type="time" name="Arrival_Time" placeholder="Enter arrival time"><br>
Price: <input type="number" name="Price" placeholder="Enter the price"><br>
<input type="submit" value="Add">
</form>
<br><br>

++++++++++++++++++++++++++++++++++++++++++++++++++
<br><br>
<h2>Update a flight to flightList</h2>
<form action="update" method="post">
Flight ID: <input type="number" name="id" placeholder="Enter ID to update"><br>
From: <input type="text" name="From" placeholder="Enter a city"><br>
To: <input type="text" name="To" placeholder="Enter a city"><br>
Departure Time: <input type="time" name="Departure_Time" placeholder="Enter departure time"><br>
Arrival Time: <input type="time" name="Arrival_Time" placeholder="Enter arrival time"><br>
Price: <input type="number" name="Price" placeholder="Enter the price"><br>
<input type="submit" value="Update">
</form>
<br><br>

++++++++++++++++++++++++++++++++++++++++++++++++++
<br><br>
<h2>Update a flight to flightList</h2>
<form action="delete" method="post">
Flight ID: <input type="number" name="id" placeholder="Enter ID to delete"><br>
<input type="submit" value="Delete">
</form>
<br><br>

++++++++++++++++++++++++++++++++++++++++++++++++++
```

\<br\>\<br\>
\<a href=*"fetch"*\>**\<h2\>**See the list**\</h2\>\</a\>**
\<br\>
++
\</body\>
\</html\>