

Data management system for air traffic

UML Modeling



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Data Model Class Diagram

Check Reference 1

UML Workflow diagram

Check Reference 2

Description of the chosen workflow - the workflow represents the case of user booking a flight through the air-traffic information system. The workflow is represented using the MVC. It starts with a user searching for a flight and finishes either with a ready boarding pass or a cancelled operation.

HTTP Request parameters, controllers and beans involved

- 1) **FlightSearch JSP** – this is a view that gives a possibility of the user to enter search criteria.

HTTP Request Parameters – uses **FlightSearchServlet**

- Starting point
- Ending point
- Date
- Airline Company
- Class seat (*Economy, Business, First*)
- Number of Passengers

Beans involved

- Flight (*Starting point, Ending point, Date*)
- AirplaneType (*Class seat*)
- AirlineCompany (*Airline Company*)
- DirectFlightBooking

- 2) **FlightSearchResults JSP** - this is a view, where the system displays the results of the previous request for search. It has no request parameters.

- 3) **BookFlight JSP** – this is a view, where the user can enter all the required data for booking a flight like first name, last name.

HTTP Request Parameters - uses **BookFlightServlet**

- FirstName
- LastName

- Address
- Gender
- Date of Birth
- Nationality
- PaymentMethod

Beans involved

- Customer (*FirstName, LastName, Address, Gender, Date of Birth, Nationality*)
- DirectFlightBooking (*PaymentMethod*)

- 4) **BookingConformation JSP** – this is a view, where the systems displays the booking code in case when the booking is successful and after that gives an opportunity of the user to display flight plan.

HTTP Request Parameters

- BookingID

Beans involved - uses FlightPlanServlet

- DirectFlightBooking (*BookingID*)
- Flight
- FlightSegment

- 5) **FlightPlan JSP** – this is a view, where the system displays the flight plan – the result of the previous request and after that gives an opportunity of the user to display boarding pass.

HTTP Request Parameters – uses BoardingPassServlet

- BookingID

Beans involved

- DirectFlightBooking (*BookingID*)
- Flight
- FlightSegment

- 6) **BoardingPass JSP** - this is a view, where the system displays the results of the previous request for displaying the boarding pass. It has no request parameters.

Beans involved

- BoardingPass

- Customer
- Currency

Sequence Diagrams

Check References 3, 4 and 5

Passengers

Airline

Airport