

Homework2 Report

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Task we meet:

We did half of the tasks using bottom up method and the rest using top down method. This web service fully meet the requirements.

There are 3 services, which are User, Booking and Query.

1. Service User is built for new users to sign up and old users to login.
2. Service Query has two services, service getroute could give all routes when user put in the departure city and the destination. It allows 1 transfer. Service getdate, when the user's itinerary(flight, date) is determined, it would give back the price and amount of available seats.
3. Service Booking can let user book the flight tickets, get the reference number and booking number, allows the put in of credit card number.

Requirements we meet:

- A. We have implement the service using top down fashion and the rest in the bottom-up fashion.
- B. We have tested on the Netbeans that every service works well independently.
- C. The SOAP message we extended is shown below.

Extend SOAP

Scenario 1, at login service part, we can add the login name and password into the soap header. The soap could keep username and password in the header. The web service could know if they are true users. If they passed, the service could insert an authentication element in the header. Then the service could send the soap to the redirection link.

```
<?xml version="1.0"?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:aut="http://authentication.me.org">
  <soapenv:Header>
    <aut:authentication>
      <aut:User>jamesbond</aut:User>
      <aut:Password>007</aut:Password>
      <aut:redirection>http://example.com/service/</aut:redirection>
    </aut:authentication>
  </soapenv:Header>
  <soapenv:Body>
    <aut:auth>
      <aut:testusername?></aut:testusername>
      <aut:testpassword?></aut:testpassword>
    </aut:auth>
  </soapenv:Body>
</soapenv:Envelope>
```

Client instructions:

After running:

```
Welcome to ticket booking system
Please sign in first to use our service
Are your a new user?(YES/NO)
1
```

input YES to register (user.register), NO to login (user.) data are recorded in Users.xml

```
Please enter your Username:
yimingy
Please enter your Password:
123456
Choose: search for flights (1) or check for booking (2) or exit(3)
```

input 1 to search and book

```
From:
Beijing
To:
Stockholm

Route 1:
Flight: Fake001
From: Beijing
To: Stockholm
Departure at: 10
Land at: 18

Route 2:
Flight: Fake002
From: Beijing
To: Helsinki
Departure at: 10
Land at: 16
Flight: Fake003
From: Helsinki
To: Stockholm
Departure at: 20
Land at: 22
```

Input departure and destination to search (query.getRoute) data are recorded in Flights.xml

```
Which one do you prefer? input NO to leave
2
What date do you want?
0211
Your trip costs 3375.0 in total.
48 seats is still available.
Please input your credit card number for booking
```

choose flight and date to get price and available seats (query.getData) data are recorded in Records.xml

data are recorded in Flights.xml

```
Please input your credit card number for booking
1561531315
Thanks for your booking! Your booking reference is 13580
PLEASE REMEMBER YOUR REFERENCE!
Input YES to leave
```

use credit card to book. get booking ref (booking.booking) data are recorded in bookings.xml(generated by server)

```
Choose: search for flights (1) or check for booking (2) or exit(3)
2
PLEASE input your BOOKING REFERENCE:
13580
Your first flight is Fake001
You're now checked in. The ticket number is: 900661289
Your second flight is Fake006
You're now checked in. The ticket number is: 900661290Fake002
Thank you, have a nice trip!
```

use booking ref to issue ticket and final ticket number(booking.issue) data are recorded in bookings.xml(generated by server)