

Bus Reservation System

Brief Explanation about Bus Reservation System (BRS):

The client will first enter the source and destination to get “**route_id**” from the web service. Then client will use this route_id to get the list of bus information (bus fare, departure time, arrival time and so on). Then the client must select one of the bus from the list and provide personal information like name, phone no., no. of tickets, etc. to request for booking the ticket. If seats are available then reservation is done and client is notified, otherwise not done.

Web Service Coordination Protocol:

The BRS web service consists of 3 operations which are “**Get Route Info**”, “**Get Bus Info**” and “**Get Reservation**”. All this operation follow the coordination protocol such that each operation is invoked in the correct order (i.e. **Get Route Info -> Get Bus Info -> Get Reservation**). It is not allowed to call operation 2 before operation 1 or operation 3 before operation 1 & 2.

Server Side:

Image 1:

BusReservation Web Service Tester

This form will allow you to test your web service implementation ([WSDL File](#))

To invoke an operation, fill the method parameter(s) input boxes and click on the button labeled with the method name.

Methods :

```
public abstract java.util.List busreservationsystem.BusReservation.getBusInfo(int)
```

getBusInfo ()

```
public abstract java.util.List busreservationsystem.BusReservation.getRouteInfo(java.lang.String,java.lang.String)
```

getRouteInfo (,)

```
public abstract java.util.List busreservationsystem.BusReservation.insertReserveInfo(java.lang.String,java.lang.String,int,int,int)
```

insertReserveInfo (, , , ,)

Image 2:

getRouteInfo Method invocation

Method parameter(s)

Type	Value
java.lang.String	rochester
java.lang.String	chicago

Method returned

java.util.List : "[busreservationsystem.RouteInfo@7cb0711]"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <S:Body>
    <ns2:getRouteInfo xmlns:ns2="http://BusReservationSystem/">
      <origin>rochester</origin>
      <destination>chicago</destination>
    </ns2:getRouteInfo>
  </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <S:Body>
    <ns2:getRouteInfoResponse xmlns:ns2="http://BusReservationSystem/">
      <return>
        <destination>chicago</destination>
        <origin>rochester</origin>
        <routeID>5</routeID>
      </return>
    </ns2:getRouteInfoResponse>
  </S:Body>
</S:Envelope>
```

Image3:

Method parameter(s)

Type	Value
int	5

Method returned

java.util.List : "[busreservationsystem.BusInfo@3a51cec3, busreservationsystem.BusInfo@133ff7]"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <S:Body>
    <ns2:getBusInfo xmlns:ns2="http://BusReservationSystem/">
      <routeid>5</routeid>
    </ns2:getBusInfo>
  </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <S:Body>
    <ns2:getBusInfoResponse xmlns:ns2="http://BusReservationSystem/">
      <return>
        <ac>true</ac>
        <arrivalTime>4 PM</arrivalTime>
        <availableSeat>40</availableSeat>
        <busID>109</busID>
        <departureTime>8AM</departureTime>
        <fare>60</fare>
        <routeID>5</routeID>
      </return>
      <return>
        <ac>false</ac>
        <arrivalTime>4 PM</arrivalTime>
        <availableSeat>40</availableSeat>
        <busID>110</busID>
        <departureTime>8AM</departureTime>
        <fare>50</fare>
        <routeID>5</routeID>
      </return>
    </ns2:getBusInfoResponse>
  </S:Body>
</S:Envelope>
```

Image4:

Type	Value
java.lang.String	jinesh
java.lang.String	jad6566@g.rit.edu
int	12346568
int	3
int	110

Method returned

java.util.List : "[busreservationsystem.ReserveInfo@235dbfdc]"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <S:Body>
    <ns2:InsertReserveInfo xmlns:ns2="http://BusReservationSystem/">
      <name>jinesh</name>
      <email>jad6566@g.rit.edu</email>
      <phone>12346568</phone>
      <qty>3</qty>
      <busid>110</busid>
    </ns2:InsertReserveInfo>
  </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <S:Body>
    <ns2:InsertReserveInfoResponse xmlns:ns2="http://BusReservationSystem/">
      <return>
        <busID>110</busID>
        <date>2017-04-02T22:37:28.120-04:00</date>
        <id>1</id>
        <passengerId>1</passengerId>
        <seat>3</seat>
        <time>22:37:28</time>
      </return>
    </ns2:InsertReserveInfoResponse>
  </S:Body>
</S:Envelope>
```

Client Side:
Operation 1 (Get Route Info):

Image 1:

Welcome to Bus Reservation System:

Enter Your Desired Username:

jad6566

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit

Choice: |

Image 2:

Welcome to Bus Reservation System:

Enter Your Desired Username:

jad6566

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit

Choice: 1

Enter Source (Eg: rochester, chicago, dallas, miami, etc.)

rochester

Enter Destination (Eg: new york city, rochester, austin, orlando, etc.)

chicago

Route Id : 5 for rochester to chicago

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit

Choice: |

Operation 2 (Get Bus Info):

Welcome to Bus Reservation System:

Enter Your Desired Username:

jad6566

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit

Choice: 1

Enter Source(Eg: rochester, chicago, dallas, miami, etc.)

rochester

Enter Destination (Eg: new york city, rochester, austin, orlando, etc.)

chicago

Route Id : 5 for rochester to chicago

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit

Choice: 2

Enter Route Id:

5

Bus-Id	AC	Fare	Departure-Time	Arrival-Time
109	true	60\$	8AM	4 PM
110	false	50\$	8AM	4 PM

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit

Choice:

Operation 3 (Get Reservation):

Enter Route Id:

5

Bus-Id	AC	Fare	Departure-Time	Arrival-Time
109	true	60\$	8AM	4 PM
110	false	50\$	8AM	4 PM

Enter Number Based On Your Choice:

1. Get Route Info 2. Get Bus Info 3. Get Reservation 4. Exit
Choice: 3

Enter Bus-ID for Reservation:

109

Enter Passenger Name:

JINESH DHRUV

Enter Number of Tickets:

15

Enter Passenger Email:

jineshdhruv8@gmail.com

Enter Passenger Phone Number:

123456789

Reservation Detail:

Reservation ID = 2

Passenger Id = 2

Bus Id = 109

Seat No = 15

Date = 2017-03-27T00:15:15.464-04:00

Time = 00:15:15

Images for Web Service Coordination Protocol:

Image 1:

```
Welcome to Bus Reservation System:
Enter Your Desired Username:
jad6566

Enter Number Based On Your Choice:
1. Get Route Info    2. Get Bus Info    3. Get Reservation    4. Exit
Choice: 2

Enter Route Id:
1
Invalid Operation Sequence(Expected: 1->2->3)
Restart again from Operation 1

Enter Number Based On Your Choice:
1. Get Route Info    2. Get Bus Info    3. Get Reservation    4. Exit
Choice: |
```

Image 2:

```
Enter Route Id:
1
Invalid Operation Sequence(Expected: 1->2->3)
Restart again from Operation 1

Enter Number Based On Your Choice:
1. Get Route Info    2. Get Bus Info    3. Get Reservation    4. Exit
Choice: 1

Enter Source(Eg: rochester, chicago, dallas, miami, etc.)
rochester
Enter Destination (Eg: new york city, rochester, austin, orlando, etc.)
new york city

Route Id : 1 for rochester to new york city

Enter Number Based On Your Choice:
1. Get Route Info    2. Get Bus Info    3. Get Reservation    4. Exit
Choice: 3|

Enter Bus-ID for Reservation:
100

Enter Passenger Name:
test

Enter Number of Tickets:
3

Enter Passenger Email:
test@gmail.com

Enter Passenger Phone Number:
123456789
Invalid Operation Sequence(Expected: 1->2->3)
```

Image 3:

Enter Bus-ID for Reservation:

109

Enter Passenger Name:

john

Enter Number of Tickets:

45

Enter Passenger Email:

john123@gmail.com

Enter Passenger Phone Number:

12345

Available seats are only 25

Repeat Only Last Operation