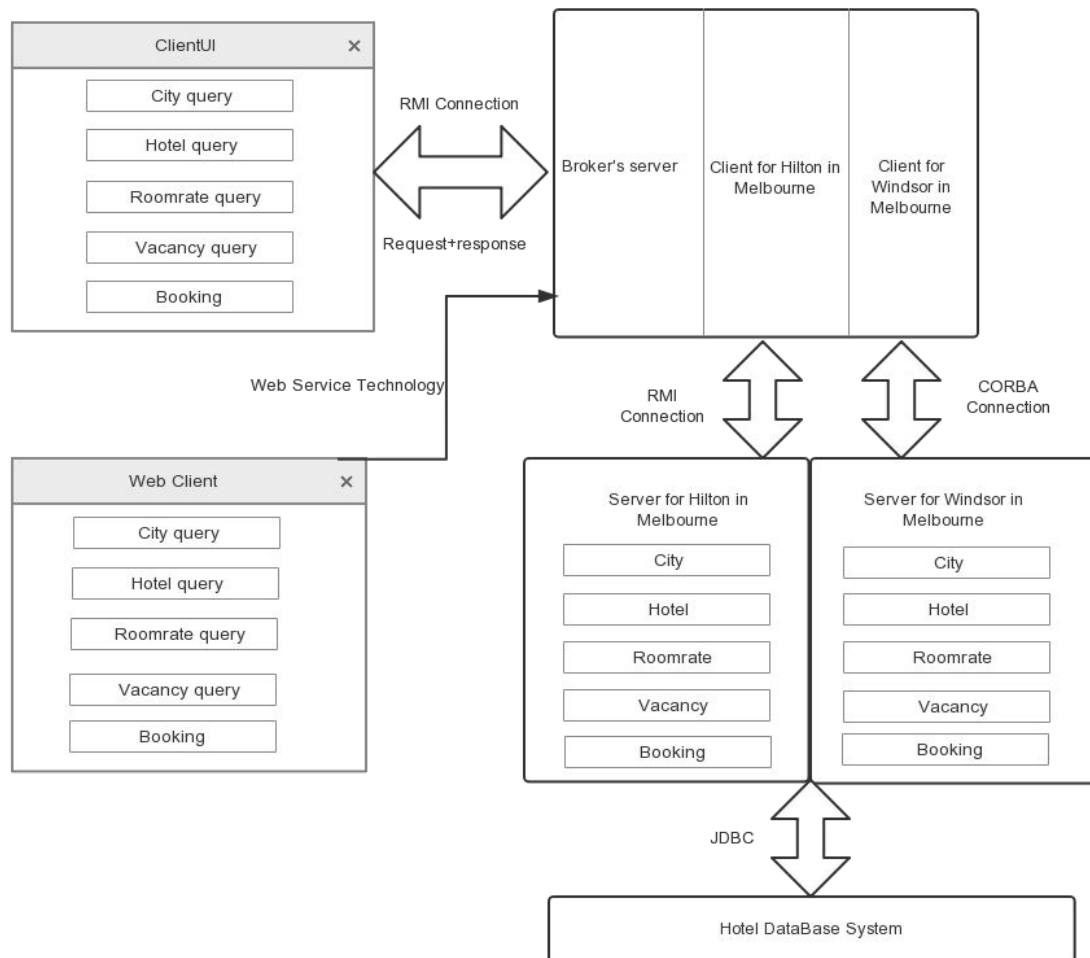


(1) System Architecture diagram:**(2) Description of each component:**

This system is a 3-tier architecture which consists of 5 parts:

- ◆ **Normal client part:** This part is designed for client user to do the query and booking operations.
- ◆ **Web service client:** This part's functions are familiar with normal client. However, we use the web service technology to access hotels.
- ◆ **Broker part:** This part is designed to pass the messages from clients to hotel server, and we use the RMI technology to communicate between normal client and broker.
- ◆ **Hotel part:** This part are hotels which provide service. Hilton in Melbourne communicates broker with RMI technology and Windsor in Melbourne communicates broker with CORBA technology.
- ◆ **DataBase part:** This part is designed to provide hotels' data and store the customers' information.

(3) Specification:

All the messages that transmitted are String type. Each line of the command will append with the

symbol “:” and every single order consists of string characters and “.”. so in both Client and Broker sides, the system will split the string by “.”, divide them into String arrays and capture the detailed information from these arrays. These instructions will guide the broker which hotel to select to executive command.

In the Web Service part, I deploy the BrokerImpl service on the web by axis2. Then the ClientWS user interface can access two hotel service through the Tomcat server.



Available services

BrokerImpl

Service Description : BrokerImpl

Service EPR : <http://localhost:8080/axis2/services/BrokerImpl>

Service Status : Active

Available Operations

- booking
- queryRoomrate
- queryBook
- queryCity
- queryRoomId
- queryVacancy
- queryHotel

DataBase system design:

In the Database part, I have designed 6 tables in the Mysql:

1.City

1	Melbourne
2	Sydney

2.Hotel

1	hilton	melbourne
2	windsor	melbourne
3	hilton	Sydney

3.hilton_m

id	roomtype	roomno	roomrate
1	Single	101	100
2	Single	101	100
3	Single	103	100
4	Double	201	200
5	Double	202	200
6	Double	203	200
7	Standard	301	150
8	Standard	302	150
9	Standard	303	150

4.hilton_mb: Table for Booking in hilton

id	roomtype	roomno	name	phone	credit	checkin	checkout

5.windsor_m

id	roomtype	roomno	roomrate
1	Single	101	110
2	Single	101	110
3	Single	103	110
4	Double	201	230
5	Double	202	230
6	Double	203	230
7	Standard	301	180
8	Standard	302	180
9	Standard	303	180

6.windsor_mb: Table for Booking in windsor

id	roomtype	roomno	name	phone	credit	checkin	checkout

(4) UML class diagram:

