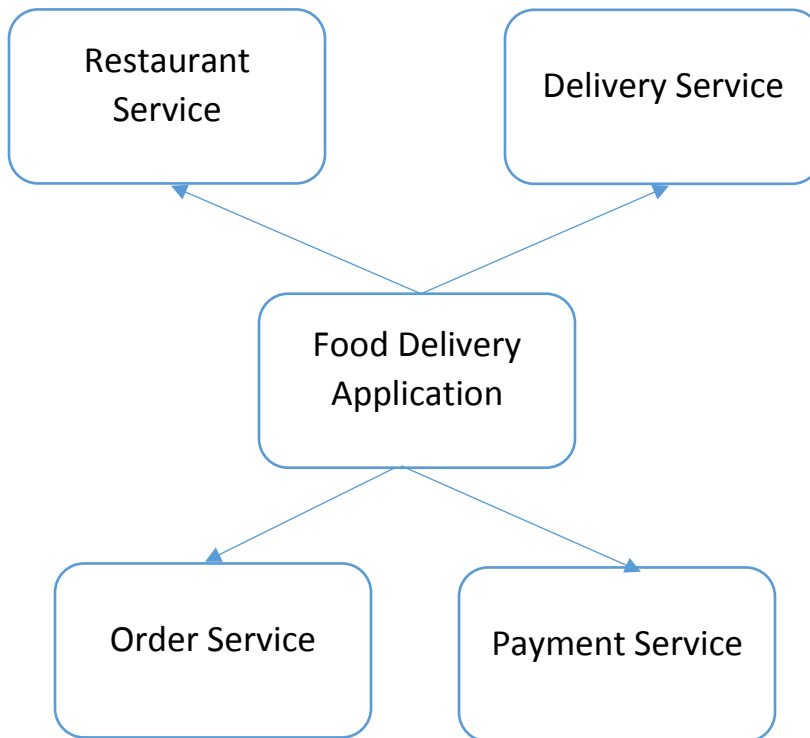
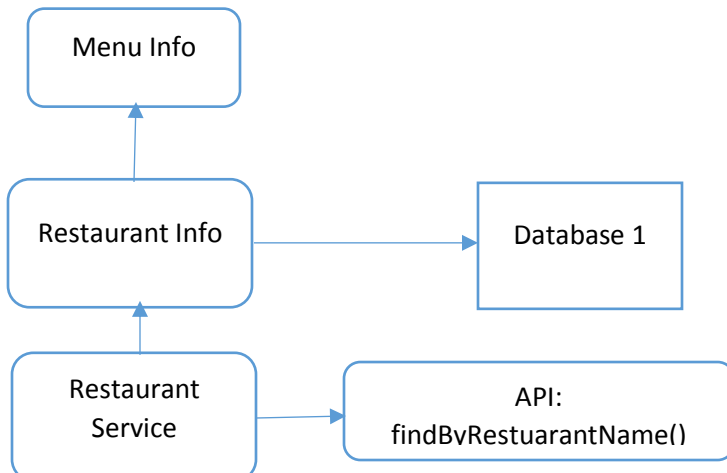


## CS504 Homework 2 Part 1

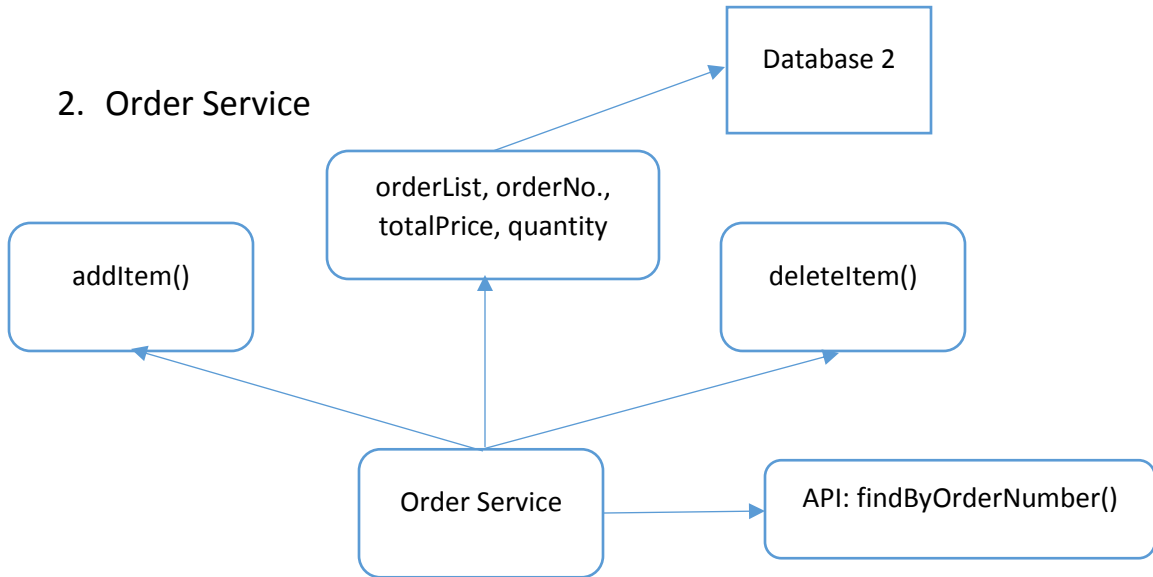
- System Structure
  - Micro Services:
    - Restaurant Service
    - Order Service
    - Payment Service
    - Delivery Service



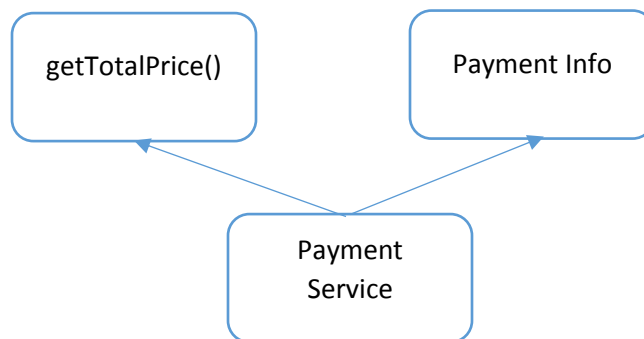
### 1. Restaurant Service



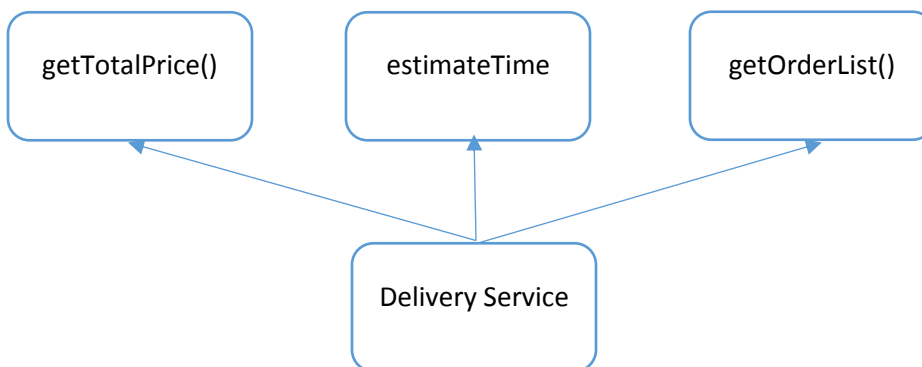
## 2. Order Service



## 3. Payment Service



## 4. Delivery Service



- Design Explanation:
  - Restaurant Service

In the restaurant service, restaurant information (name, address and menuInfo) is included. In the menuInfo, different dishes and the related prices are included. People can search an interested restaurant via findByRestuarantName API. All the restaurant information will be saved in Database 1, as well as the menu information.
  - Order Service

In the order service, there are two methods (addItem and deleteItem) dealing with customer's requirement. The ordered dishes will be added to the orderList. An order number will be generated at the same time. Also, the total price of the order will be calculated. All the information in the order service will be saved in Database 2. Customer could search the order via findByOrderNumber API.
  - Payment Service

Payment information which includes credit card number, name on the card, expiration date and secure code will be organized in payment service. getTotalPrice helps obtain the total price from order service. All the payment information will be saved in Database 3.
  - Delivery Service

After the payment made successfully, the delivery service will return the order information and estimated delivery time to the frontend web.

- Test Case Example:

```
{
  "restaurantName": "res_1",
  "restaurantAddress": "504 CS Street, Mountain View, CA 888888",
  "timestamp": "2017-04-01T18:50:35Z",
  "menuInfo": {
    "dishOne": "dish_1",
    "priceOne": "10",
    "dishTwo": "dish_2",
    "priceTwo": "20",
    "dishThree": "dish_3",
    "priceThree": "15"
  }
}
```