

Hotel Reservation System

Abstract

Hotel Reservation System is a java spring boot and mysql which runs on a eclipse. The main feature of this project is manage rooms, Booking, Services, Hotel, Customers and Payments.

The major project in java using spring boot, which is suitable for my final project in edubridge learning center, the main modules of the project is Booking module, Payment module, Rooms module, Customer module and Hotel module, which performs all the operation in their respective domains. Spring Boot Project on Hotel Reservation System is secured application which run inside the JVM and we have used Eclipse IDE for developing this project.

For developing this Hotel Reservation System in Spring boot, we have used many of the spring boot libraries. Like for database option we have used JPA, hibernate and for writing custom queries we have used entity manager. All the dependencies of Hotel Reservation System, we are managing by pom.xml file.

Front End- Spring boot, HTML, CSS, JavaScript

Back End- MYSQL

Introduction

The primary goal of hotel management is to maintain a steady influx of visitors and guests throughout the year, as well as to promote the hotel's extensive range of services and USPs and how they benefit visiting customers through marketing campaigns.

This application allows the hotel management the ability to operate the entire system from a single online interface, giving them more power and flexibility. Room booking, staff management, and other hotel management services are included in this project.

The manager can use the system to advertise available rooms. Customers may see and reserve rooms from the comfort of their own homes. Admin has the authority to approve or reject a customer's booking request. Other hotel services are also available for consumers to see and book. As a result, the system may be used by both consumers and management to control hotel activities on the go.

Modules

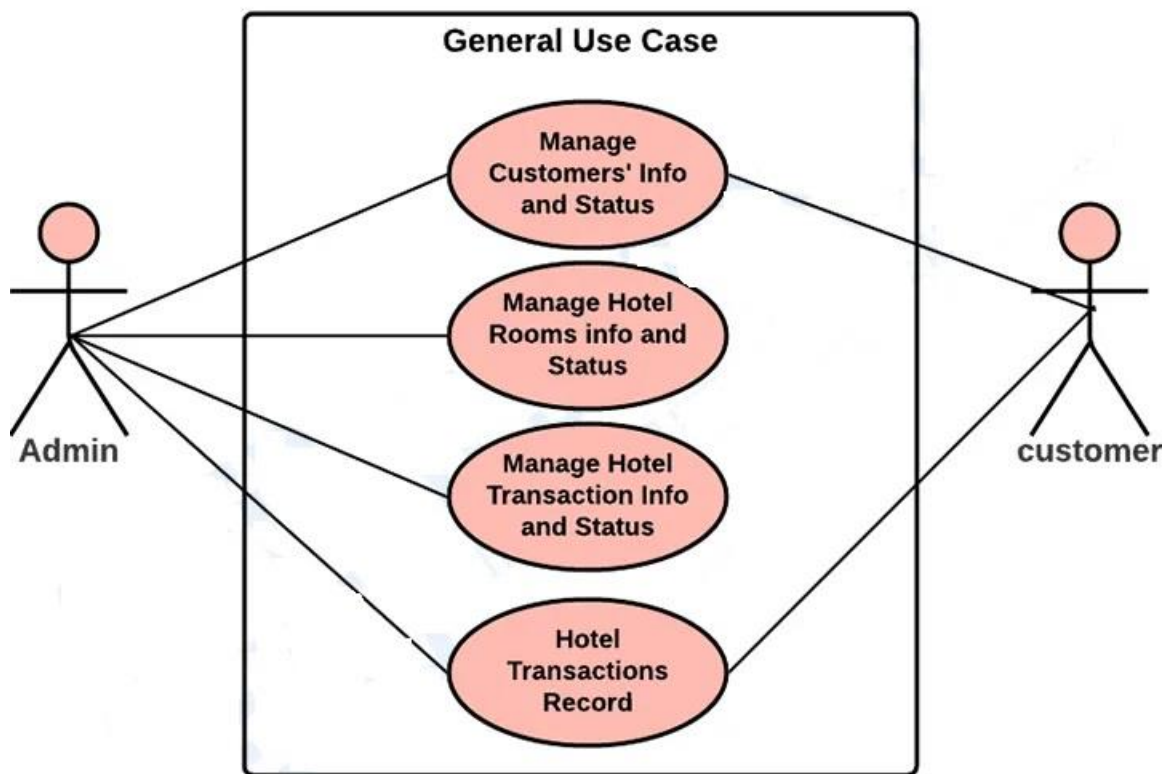
- Rooms module: We can manage all the operations to Rooms from this module.
- Booking module: this module is normally developed for managing the booking operations.
- Services module: all the operations related to services will be managed by Services.
- Hotel module: this module manages hotel functionalities.
- Customers module: Customers module performs all the create, update and delete operations of customers.
- Payment module: it manages all the functionalities of payments.

Use Case Diagrams

A use case diagram is a visual representation of how a user might interact with a program. A use case diagram depicts the system's numerous use cases and different sorts of users. The circles or ellipses are used to depict the use cases.

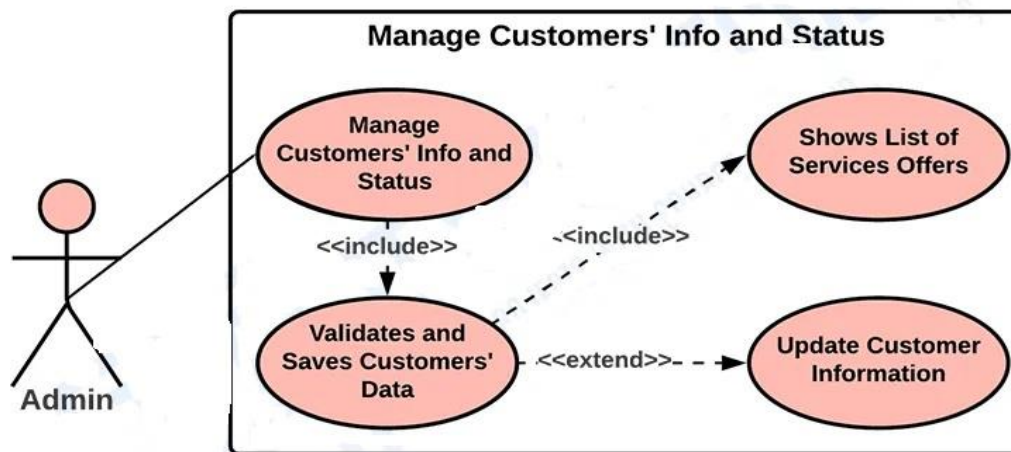
By creating the use case of the Hotel Management System, you must determine first the possible features to identify the flow of the system. After that you can now create the blueprint or core of the system function.

HOTEL MANAGEMENT SYSTEM



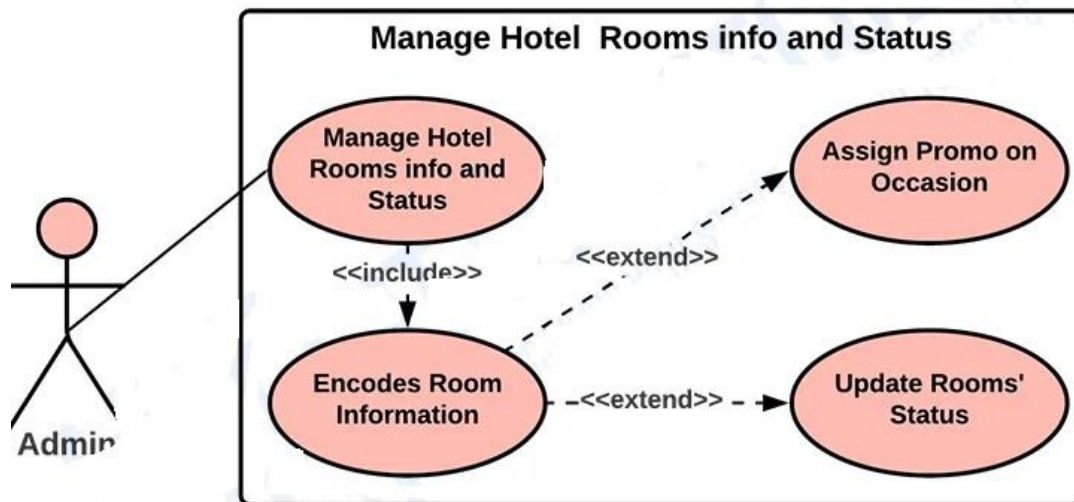
USE CASE DIAGRAM

This diagram shows the general processes or function that the system could do that is based on the transactions done by the customer and the admin or employee about checking in or out to the hotel.

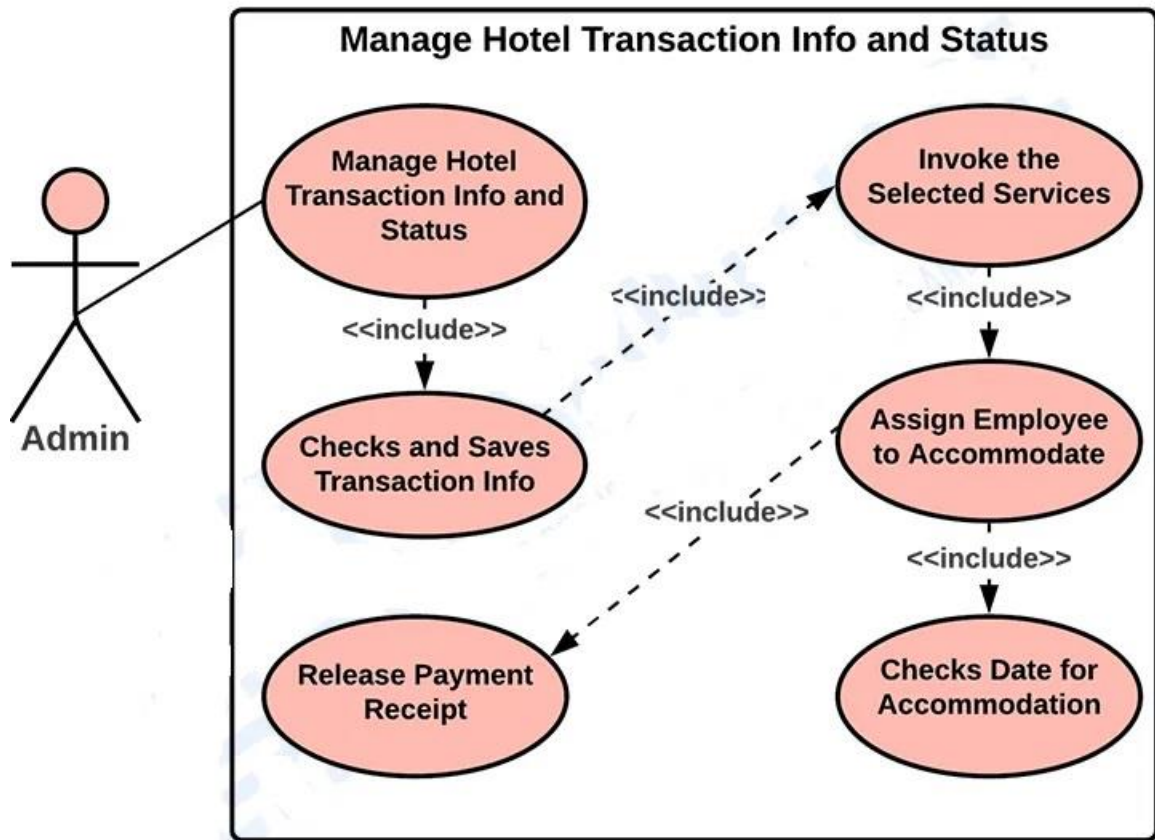


This is where the admin or the main user will have to require the customer their basic information that will serve as the basis for the transaction that would be applied or requested by the customer.

As you can see the customers' information should be encoded to the system. The system then will monitor its details to validate it and then saves the data.

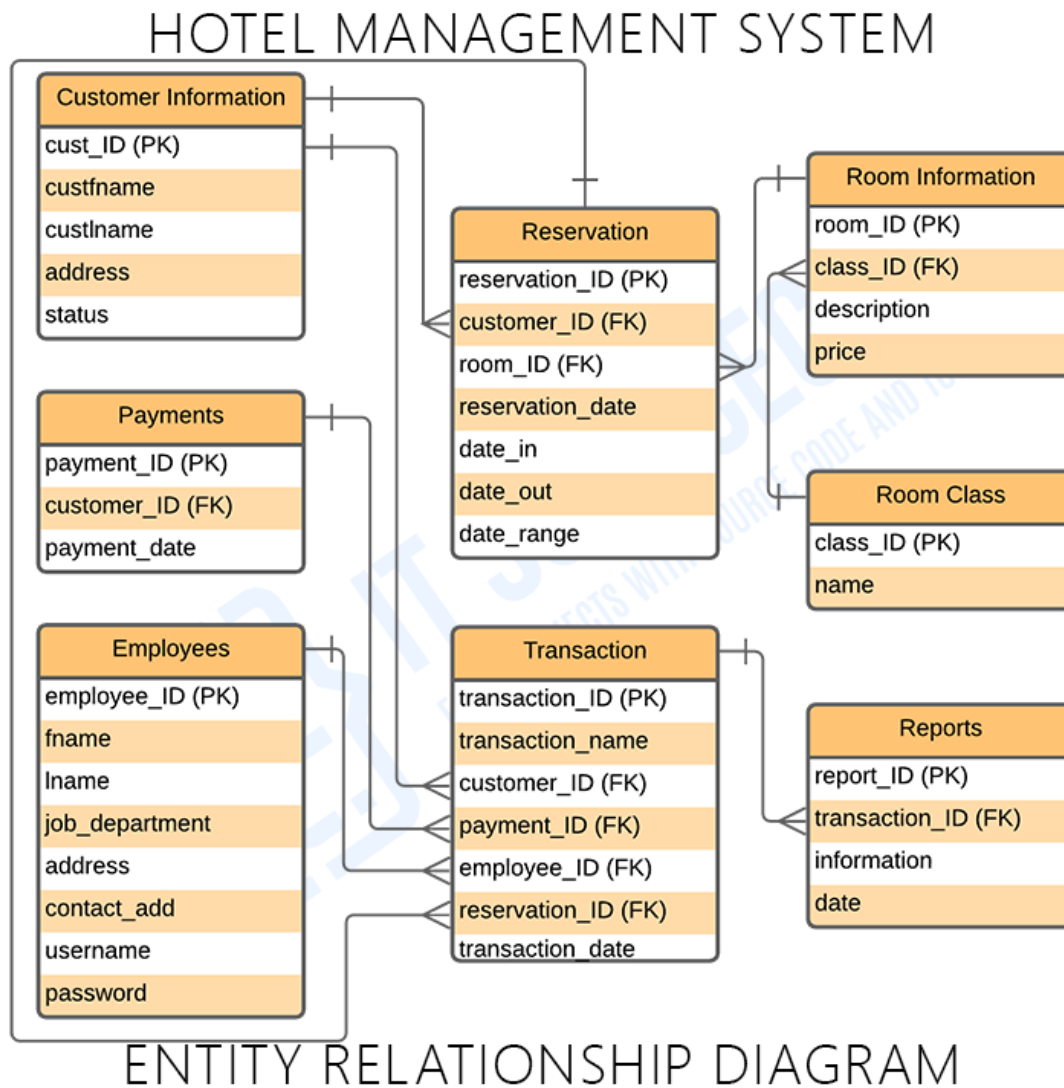


This is the process where the admin will have to manage the hotel or inn rooms' information as well as its status. The room management is essential to the hotel management its because to avoid conflict between customers. It is also to improve the customer service of the hotel.



This process explains about how the admin or users handles the services that they offer to their customers because it is an essential part of the hotel management system. These products or services information were used to determine if what type of transaction has been accessed by the customer and to prep for the request or to achieve for desired service by the customer.

ER Diagram



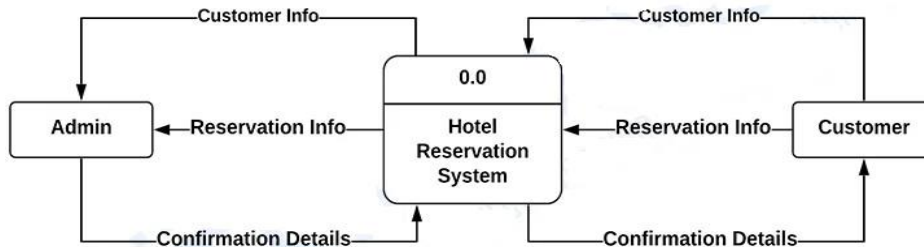
This hotel management system database was made based on hotel requirements. The system can encode customer information. Hotel admin can have access to the customer status and information for important transaction. They can handle the data needed in managing customer and employee files as well as the transactions made by the customer and staff.

The features included in the hotel management system ER diagram were the security and monitoring of the customer records, transactions and status. These features

were also listed and recorded in reports that served as the history of transactions done in the system.

Data Flow Diagram

HOTEL RESERVATION SYSTEM



DATA FLOW DIAGRAM LEVEL 0

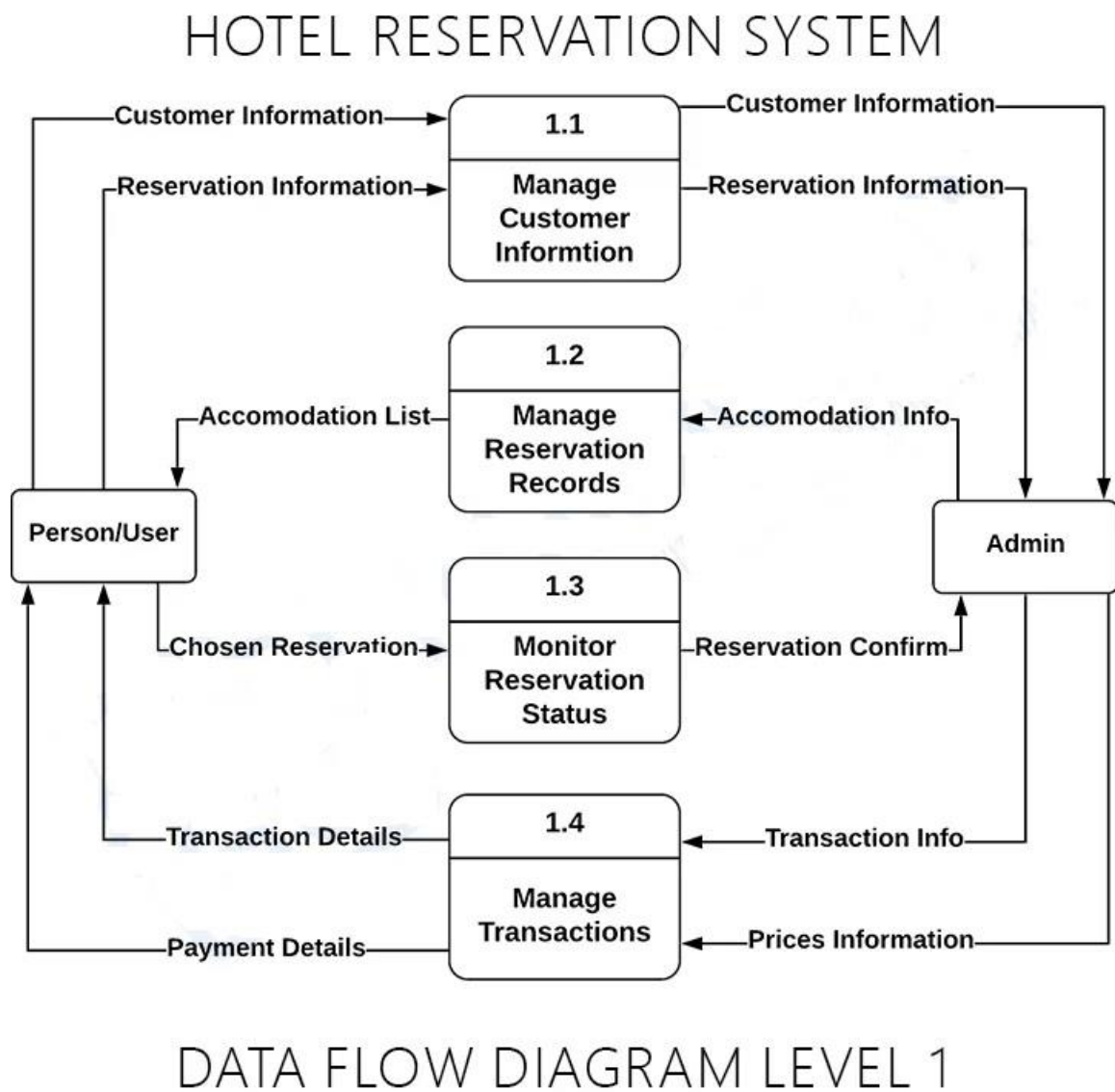
The Hotel Reservation System DFD level 0 is also known as context diagram. It's supposed to be an abstract view, with the mechanism represented as a single process with external parties.

This DFD for the Hotel Reservation System depicts the overall structure as a single bubble. It comes with incoming/outgoing indicators showing input and output data.

In this data flow diagram you will see the general process done in Hotel Reservation System monitoring. This will also serve as a guide as you go through the deeper processes

of the Hotel Reservation System data flow diagrams.

As you see, when you build the levels of data flow diagrams, the connections of the transactions and data also broadens and gets more specific.



The content of Hotel Reservation System DFD level 1 must be single process node from the context diagram and is broken down into sub processes

In this level, the system must display or reveal further processing information. The following are essential data to accommodate:

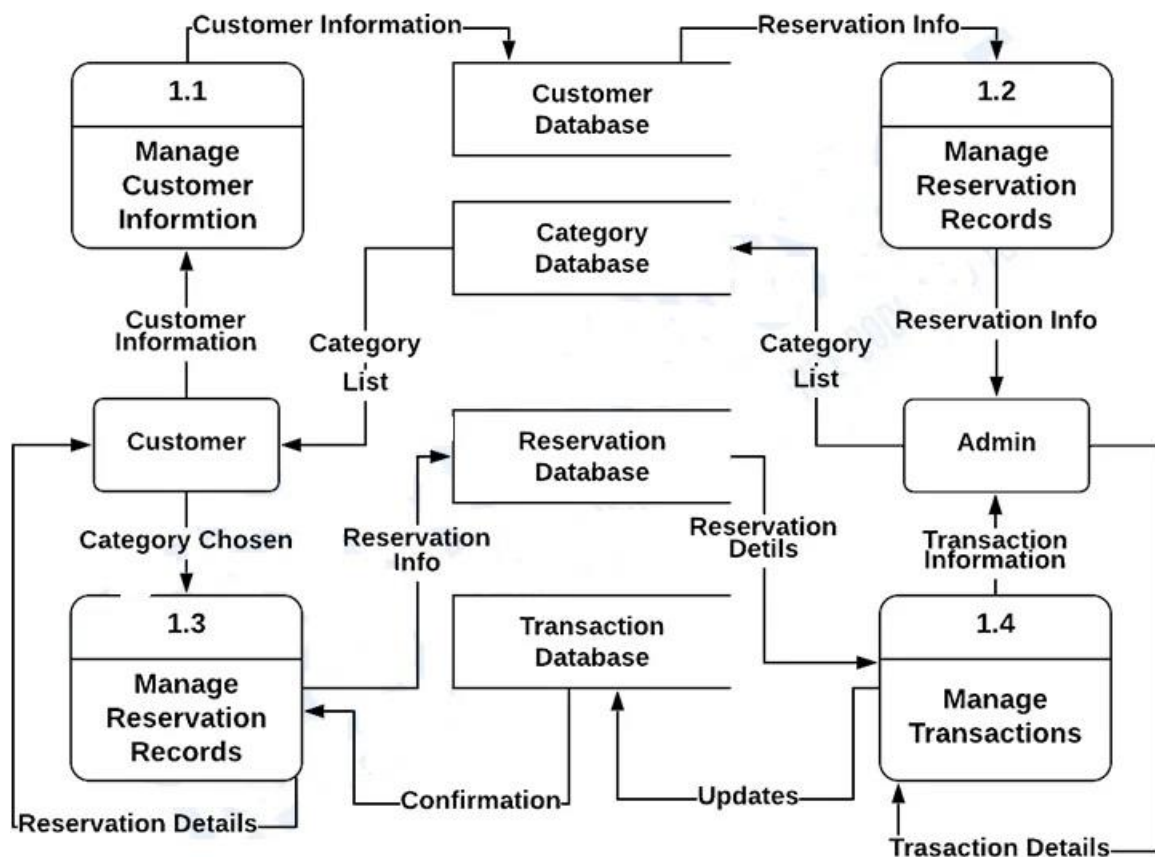
- Reservation Records
- Customer Information
- Date of Reservation
- Transaction Records
- Revenue
- Employee Records

These procedures require information such as record of customers, reservations, payment, transaction and revenue from which served as the bases for the Hotel admin to manage the Hotel Reservation System.

This type of data is represented by a data store. With being knowledgeable about the DFD level 1 of the Hotel Reservation System, you will know then its broaden context terms.

In addition to that, this may also serve as your reference on how the inputs or data fed on the system. Then you will be also informed about the outputs that the system gives. These processes shown in the DFD were all based on the concept of Hotel Reservation System.

HOTEL RESERVATION SYSTEM



DATA FLOW DIAGRAM LEVEL 2

After presenting the Hotel Reservation System DFD levels 0 and 1, next to that is level 2. Here's what you need to consider in creating data flow diagram level 2 for Hotel Reservation System. The Level 2 DFD for the system should represent the basic modules as well as data flow between them.

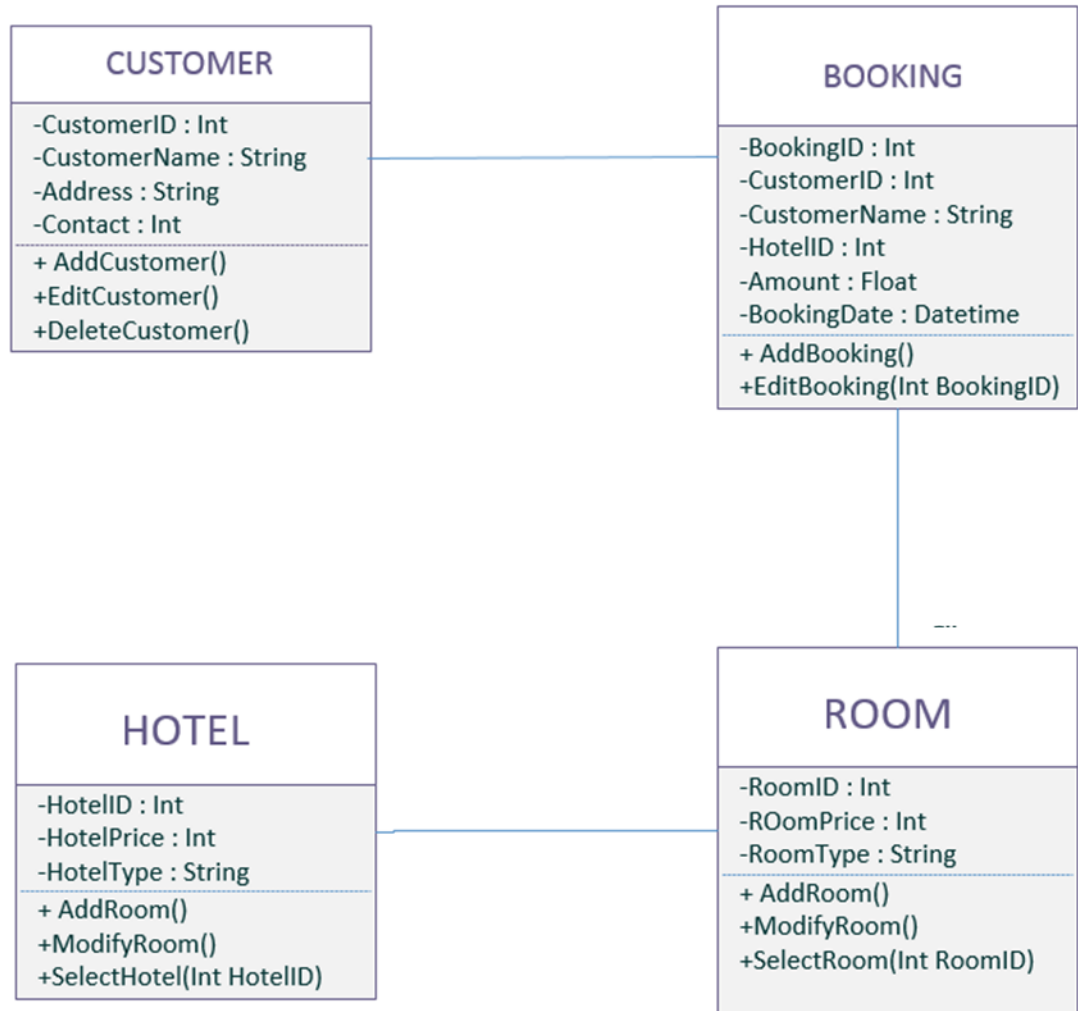
Since the DFD level 2 is the highest abstraction level, its Hotel Reservation System processes must be detailed that is based on the DFD level 1. Finally, after figuring the processes given in the system, the user will now have their request being processed. The Processes that the system should prioritize are as follows:

- Manage Customer Information
- Manage Reservation Records
- Checks Date of Reservations
- Update Reservation Status
- Monitor Transaction

DFD level 2 let's you know the ideas on where does the data inputs goes and inputs comes within the Hotel Reservation System. Considering the the dataflow levels mentioned above, you can determine well the importance of breaking the processes into more specific manner.

The presented level not only shows you the detailed processes of system, but also gives you precise destination of the data that flows in the system.

Class Diagram



Conclusion

The system is having some benefits for customers too. In home page customers can put their email address or phone number for downloading the booking apps directly on their phone.

The application will work for both OS Platform (IOS & Android). By this customers can book by using this application. Besides, customers can also book online without registering into the system. Again, customers no need to worry for payment. But for reservation they need to key in their credit card details for verification purposes. It will not charge them promptly. So, overall this system will give the customers a better user friendly environment to book online.

All the difficulties encountered by the employees in the hotel were rated as moderately extent which means that they don't usually encountered such problems.

In the security, accuracy, and speed they rated it fair, which means, that they have to improve their manual performances into faster and effective way.

In terms of urgency of an automated booking system, majority of the respondents answered it yes, because they observed and realized that they need more reliable, efficient, and helpful system.