Analysis Model-Class Model for Hotel Management System

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Objective

Identify Analysis Classes and assign responsibilities.
Draw Analysis class Model using UML 2.0 Notations.
Implement Analysis class Model-class diagram with a suitable object oriented language (JAVA)

Theory

Purpose of Class Diagrams

- Shows static structure of classifiers in a system
- Diagram provides a basic notation for other structure diagrams prescribed by UML
- Helpful for developers and other team members too
- Business Analysts can use class diagrams to model systems from a business perspective

What is a Class?

A description of a group of objects all with similar roles in the system, which consists of:

- Structural features (attributes) define what objects of the class "know"
    - Represent the state of an object of the class
    - Are descriptions of the structural or static features of a class
- Behavioral features (operations) define what objects of the class "can do"
    - Define the way in which objects may interact
    - Operations are descriptions of behavioral or dynamic features of a class

Class Notation

A class notation consists of three parts:

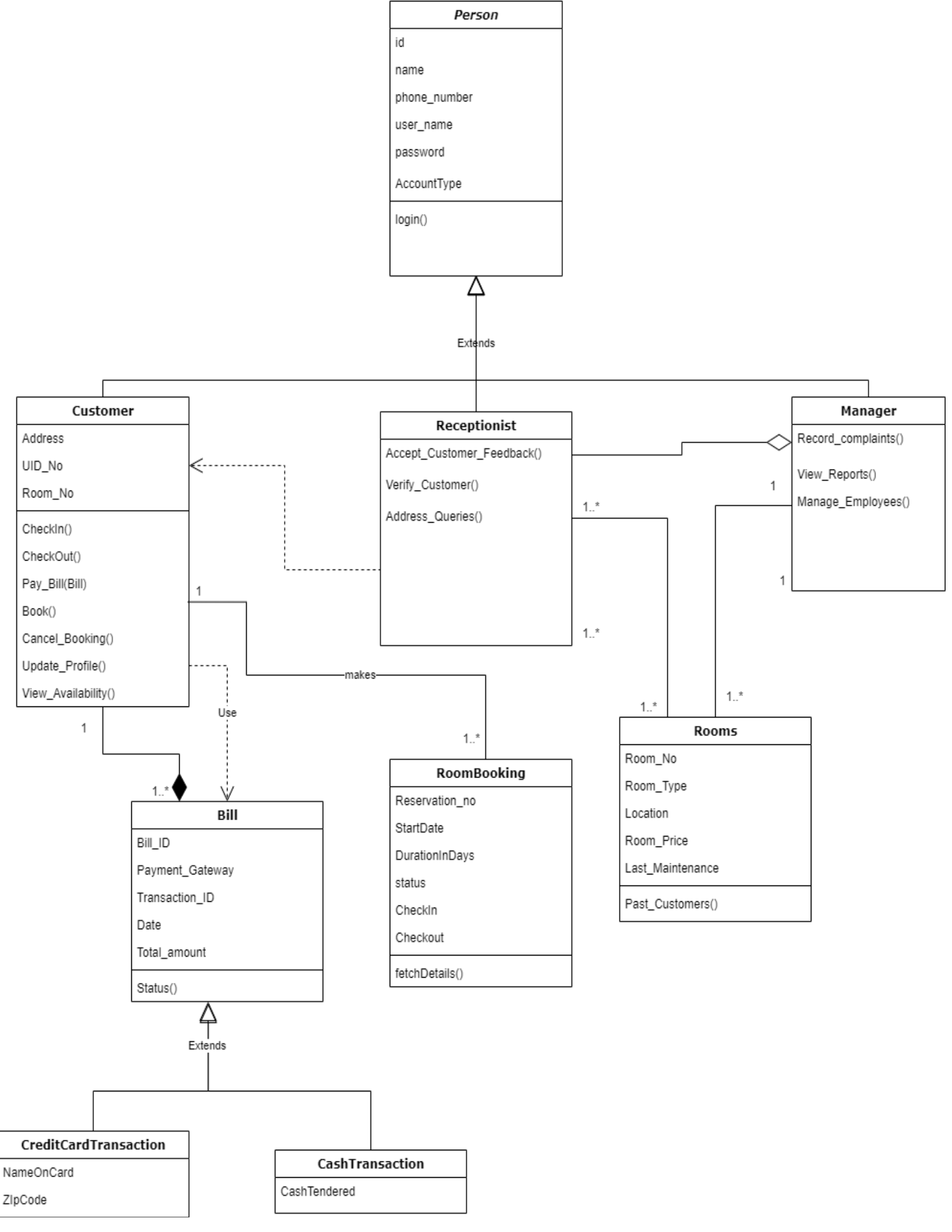
- Class Name
    - The name of the class appears in the first partition.
- Class Attributes
    - Attributes are shown in the second partition.
    - The attribute type is shown after the colon.
    - Attributes map onto member variables (data members) in code.
- Class Operations (Methods)
    - Operations are shown in the third partition. They are services the class provides.
    - The return type of a method is shown after the colon at the end of the method signature.
    - The return type of method parameters is shown after the colon following the parameter name.
    - Operations map onto class methods in code

Class Relationships

A class may be involved in one or more relationships with other classes. A relationship can be one of the following types

- Inheritance (or Generalization)
- Simple Association
- Aggregation
- Composition
- Dependency

Figure


Person
id
name
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user_name
password
AccountType
login()
Extends
Customer
Address
UID_No
Room_No
CheckIn()
CheckOut()
Pay_Bill(Bill)
Book()
Cancel_Booking()
Update_Profile()
View_Availability()
Receptionist
Accept_Customer_Feedback()
Verify_Customer()
Address_Queries()
Manager
Record_complaints()
View_Reports()
Manage_Employees()
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Payment_Gateway
Transaction_ID
Date
Total_amount
Status()
RoomBooking
Reservation_no
StartDate
DurationInDays
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Checkout
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Location
Room_Price
Last_Maintenance
Past_Customers()
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CreditCardTransaction
NameOnCard
ZIpCode
CashTransaction
CashTendered