Online Hotel Booking Application

Analysis and Design Document

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Revision History

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
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# Project Specification

# There are many web applications available which makes people’s work quicker. Here we introduce new web application where user can book rooms via our handy web app. This application allows users to book hotel rooms. Using this system user can view and check for various rooms available and simultaneously book them by making online payment via credit card. The system also provides user with additional facilities like Jacuzzi, swimming, meals and additional bed addition along with their associated charges. The system calculates the total cost on booking the services. Once the user makes the payment, system will provide online receipt to the user. User can view the room booking in an effective graphical user interface. Since room bookings will be displayed in effective graphical user interface user will get to know which rooms are booked and how many rooms are available for booking. Using this application user can select the room according to his preference. The rooms which are already will be disabled and the rooms which are available user just have to select it and then proceed to payment option. Once user makes the payment system will generate receipt and it will be sent to respective users email id and it will be reported to the admin, when user visits the hotel, he must show the receipt for the accommodation. The application also contains an admin side for the app owners and hotel owner-side where each hotel manager can manage the hotel booking page.

The application will have three types of users:

* ADMIN
* HOTEL MANAGER
* REGULAR USER

Each of them will have different functionalities available.

# The app will be delivered as a cloud - based solution.

# Elaboration – Iteration 1.1

# Domain Model

Each type of user (admin, hotel manager, regular user) will have an account associated. The hotel manager and regular user will have a user profile attached.

The hotel manager can have multiple hotels assigned to his account and can manage each one of them. He will be able to define what types of rooms the hotel has, the price etc. He can also see and manage the bookings, see reports.

The regular user can see the hotels available for one given location. Each location has many hotels attached. Bookings may be accessed by the user, new ones can be made or active ones edited.

So, I have identified the data tables: Accounts, User profiles, Roles, Hotels, Hotel Chain, Rooms, Availability, Locations, Bookings, Payments and also the auxiliary tables necessary for the table relations.

# Architectural Design

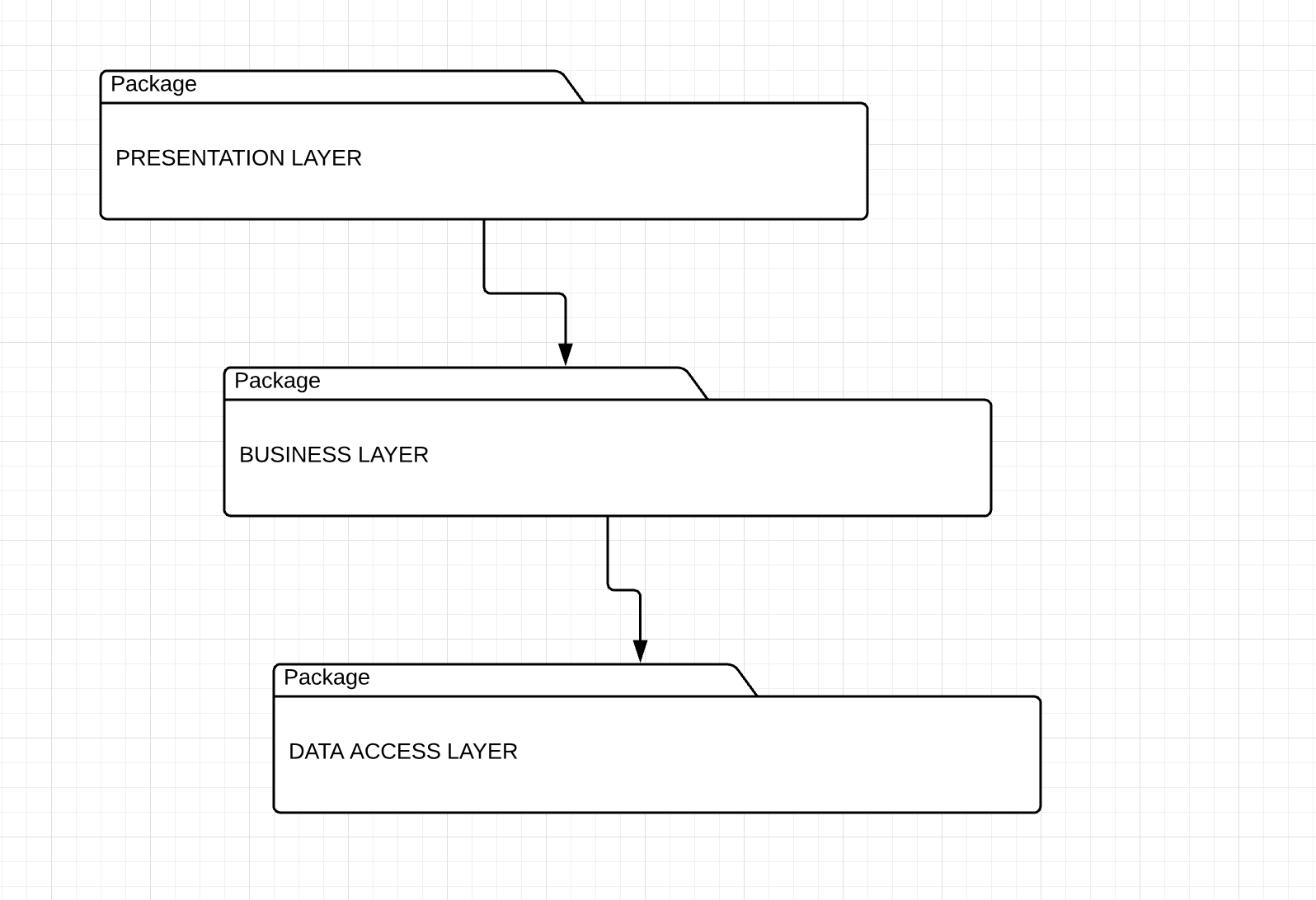
## Conceptual Architecture

The main architecture used in the project is MVC:

View renders the data from the Model in response to the request made to the model by controlled events made by user interaction.

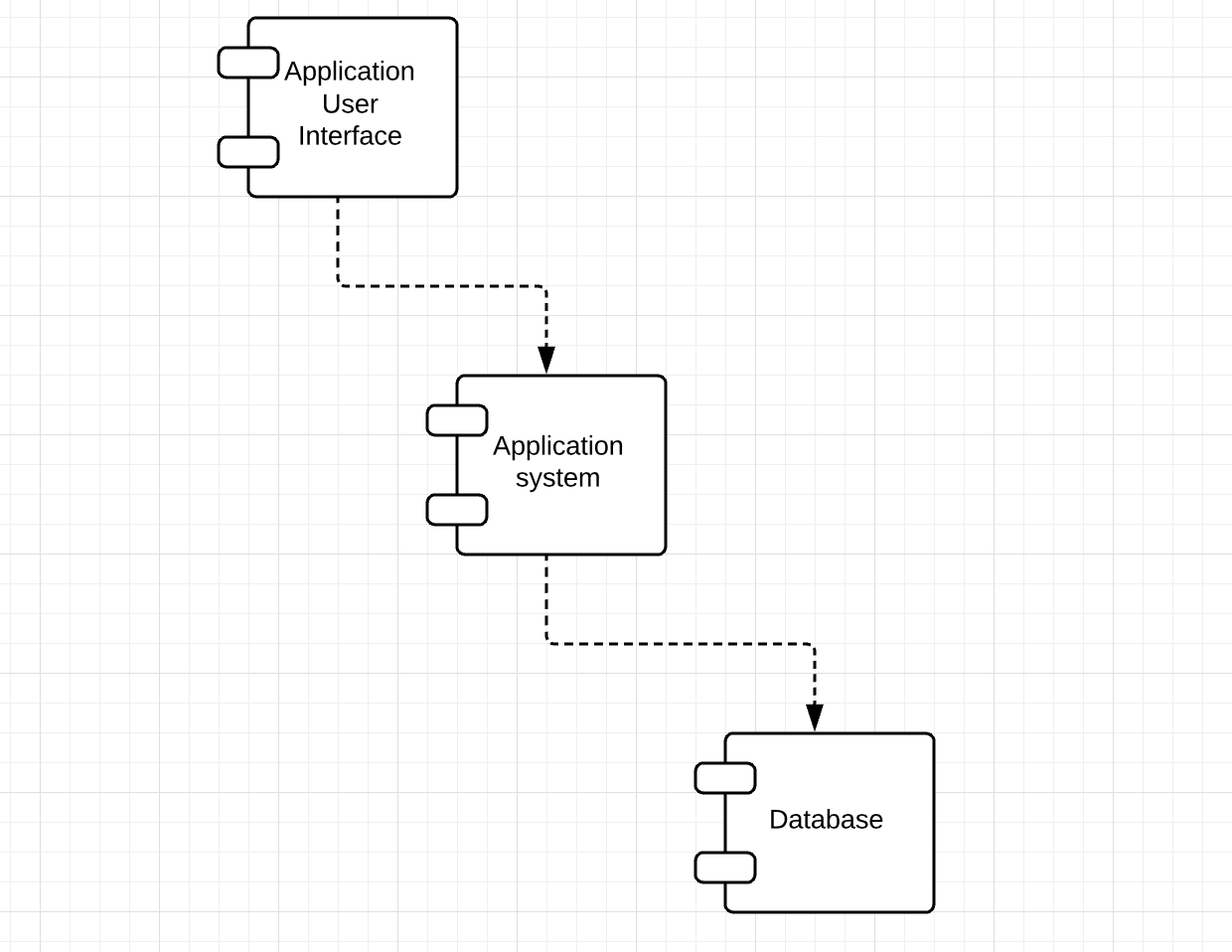
Model View Controller is a design approach to separate the application object model from GUI, originally invented around 80s. Then later on it has become a widely accepted common design pattern. The main objective behind this pattern is to decouple the view of the data (presentation layer) from the actual data processing so that the same model can be used for various views. This is achieved by using three different types of objects that interact with each other in loosely coupled manner with their discreet set of tasks.

## Package Design

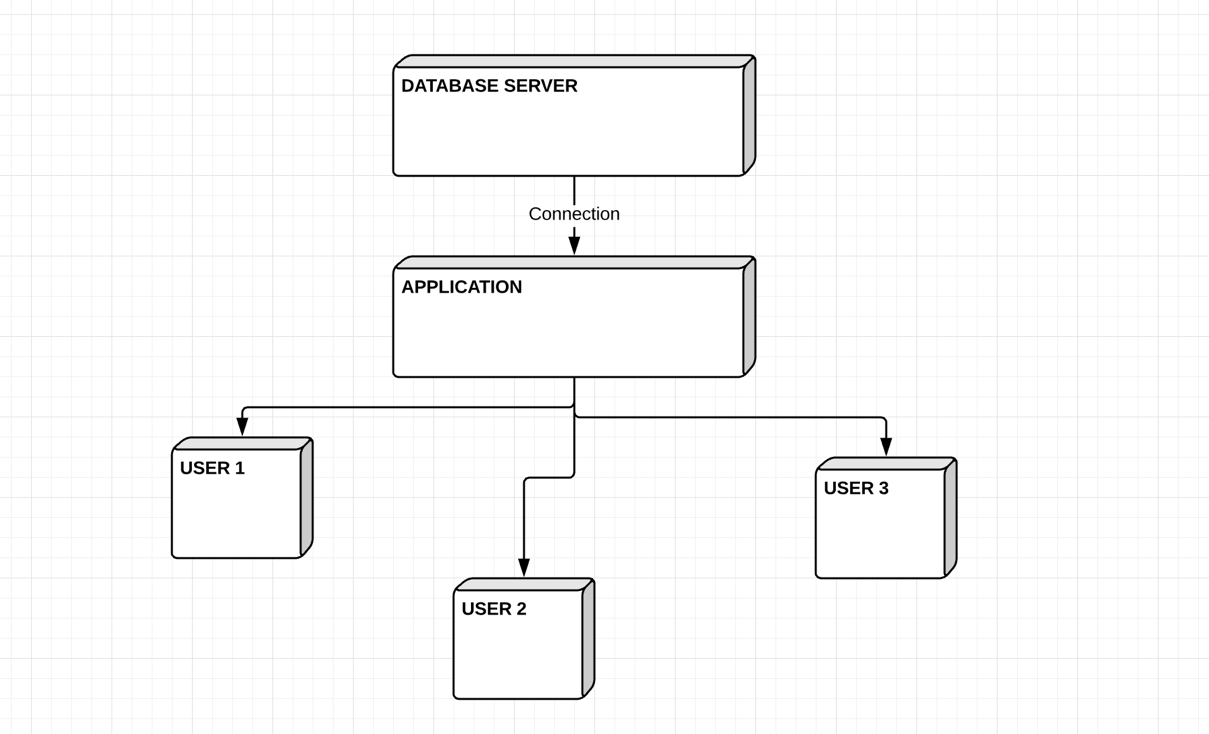
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## Component and Deployment Diagrams

Component diagram:

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Deployment diagram:

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# Elaboration – Iteration 1.2

# Design Model

## Dynamic Behavior

*[Create the interaction diagrams (1 sequence, 1 communication diagrams) for 2 relevant scenarios]*

## Class Design

*[Create the UML class diagram; apply GoF patterns and motivate your choice]*

# Data Model

*[Create the data model for the system.]*

# Unit Testing

*[Present the used testing methods and the associated test case scenarios.]*

# Elaboration – Iteration 2

# Architectural Design Refinement

*[Refine the architectural design: conceptual architecture, package design (consider package design principles), component and deployment diagrams. Motivate the changes that have been made.]*

# Design Model Refinement

## *[Refine the UML class diagram by applying class design principles and GRASP; motivate your choices. Deliver the updated class diagrams.]*

# Construction and Transition

# System Testing

*[Describe how you applied integration testing and present the associated test case scenarios.]*

# Future improvements

*[Present future improvements for the system]*

# Bibliography