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System Architecture
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Hotel Tango System Architecture

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Table of Contents

System Architecture and System Design	3
Architectural Structure.....	3
Mapping Subsystems to Hardware.....	3
Persistent Data Storage.....	3
Network Protocol	3
Use Case Diagram.....	4
System Sequence Diagrams	5
Create Customer Sequence Diagram	5
Create Room Type Sequence Diagram	5
Create Room Sequence Diagram	5
Create Reservation Sequence Diagram	6

System Architecture and System Design

Architectural Structure

The architectural structure of my application is the Model-View-Controller. The database is derived from classes. We then have views that are displayed to the user which displays data from the various classes. Then, we use controllers to pass data to and from the database.

Mapping Subsystems to Hardware

This system will run on a single server. In a real-world scenario, this would run on a server from a cloud provider. This would allow the ability to scale the system up and out. As we scale resources appropriately, this would allow us to not have the need for multiple machines. We can have client machines that can access a single end point.

Persistent Data Storage

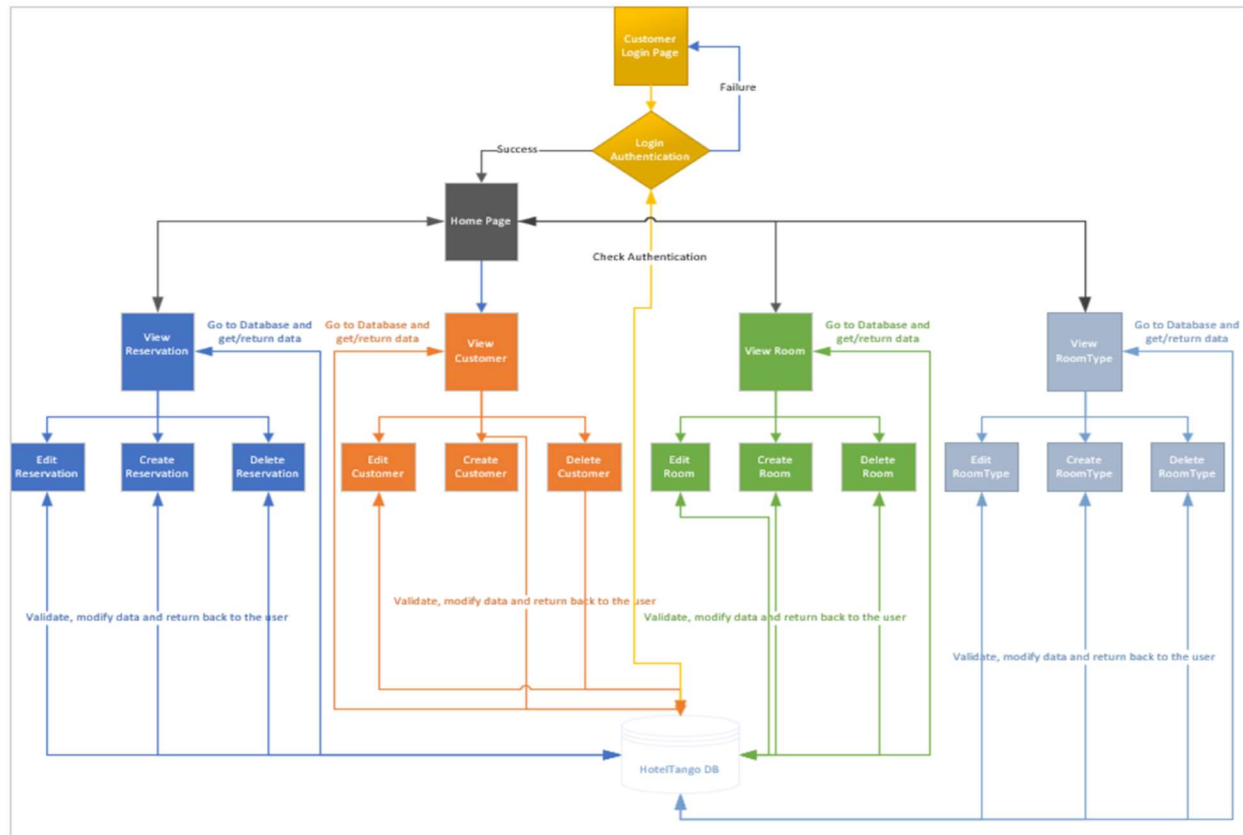
We are using a relational database that will be geo-replicated. As the user actions are taken in the system and changes are made, these changes will be asynchronously committed to a relational database. Also, due to our relational database having ACID compliance, we can guarantee that transactions will be persisted and written correctly to the database.

Network Protocol

This app will run on one machine, but all application traffic will converse via GET/PUT API, HTTPS and SQL Server ODBC.

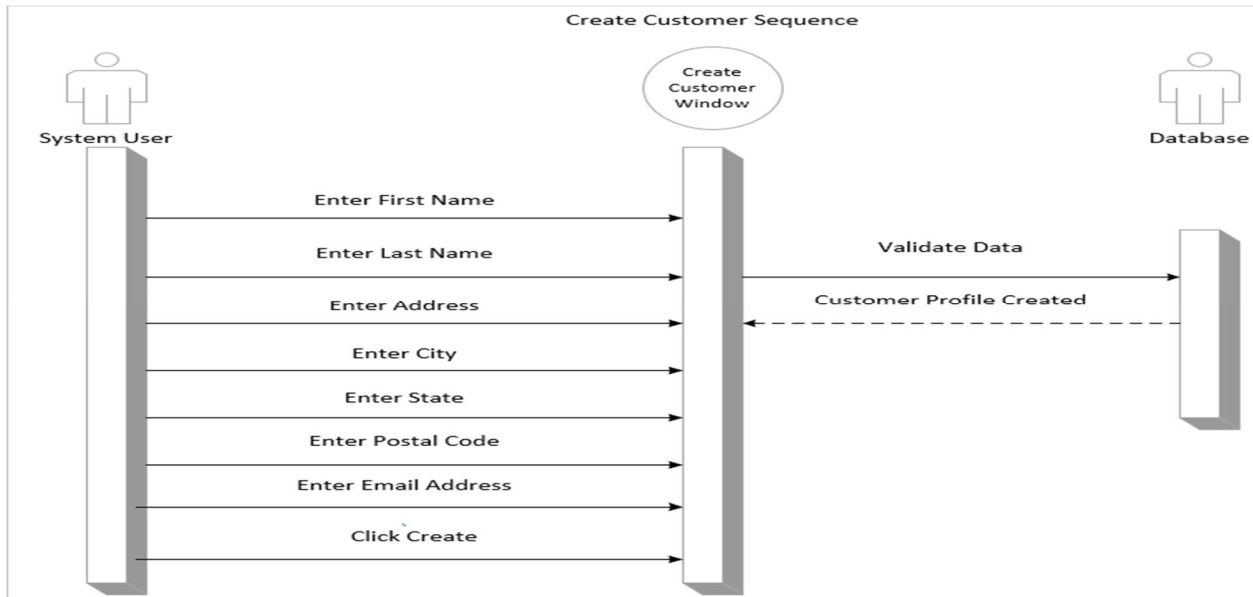
Use Case Diagram

The following diagram highlights the actions that can be performed within the Hotel Tango App. Depending on the type of action you wish to perform within the Hotel Tango App, you are able to trace the flow path of operations.

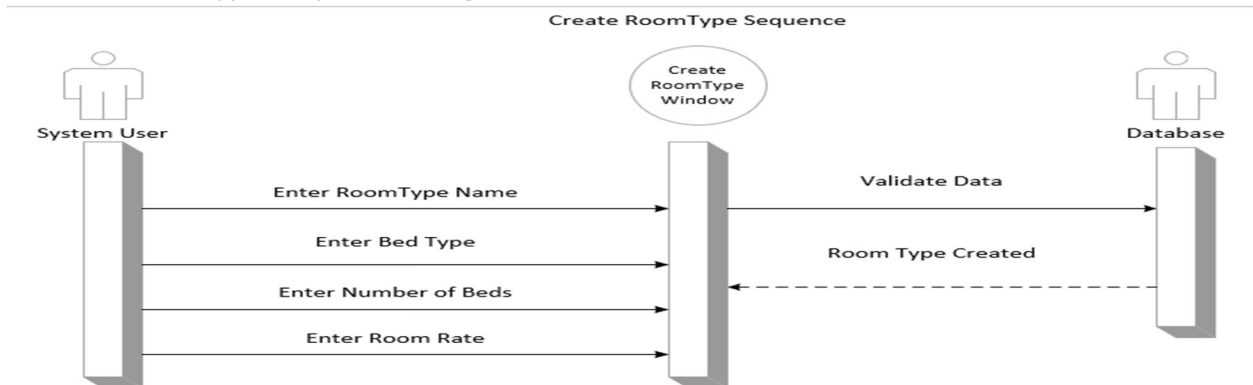


System Sequence Diagrams

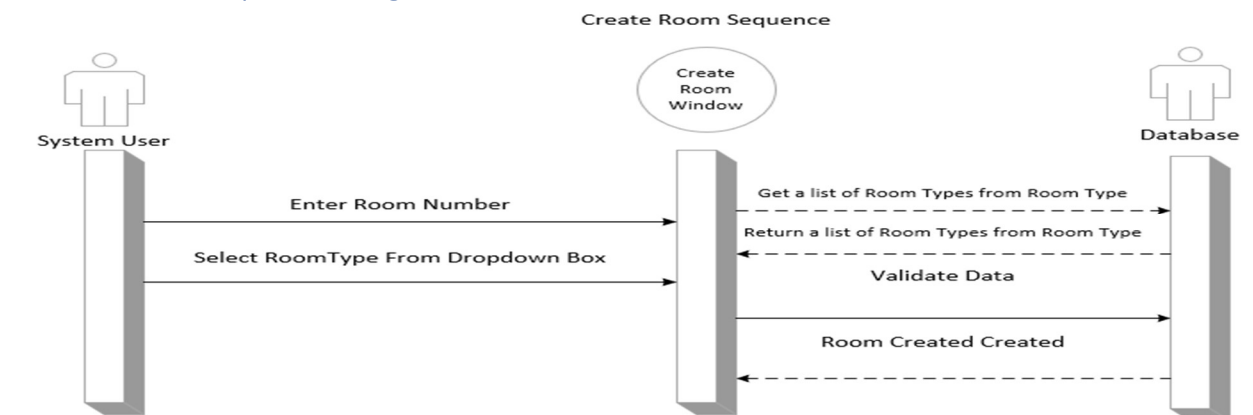
Create Customer Sequence Diagram



Create Room Type Sequence Diagram



Create Room Sequence Diagram



Create Reservation Sequence Diagram

