SYSTEM DESIGN DOCUMENTATION

Restaurant Reservation System

v1

Introduction

This document contains system overview of the Restaurant Reservation System. This consists of the Risks, Assumptions, Issues, and Dependencies that may encounter during the development. The design considerations, the goals and guidelines as well as the system design.

System Overview

Restaurant Reservation System is an API designed to efficiently manage customer reservation. The API includes:

Customer Booking System. For managing customer reservations.

Notification System. For managing customer notification and reminder.

This System is created using Spring Boot to manage the REST transactions in inserting, updating and reading records to MySQL database. It also utilizes the Spring Boot Scheduler to run a scheduled job that reminds the customer regarding their upcoming schedule.

Assumptions and Constraints

RAID	Impact	Remarks
Reservation Date and time only allow time that are divisible by 30 minutes	Customer cannot choose reservation time that are not in 30-minute interval	Accepted
Communication method or mode are only defined during creation	Communication method or contact channel cannot be updated.	Accepted
New reservation datetime and guest number are required in update	Cannot update one field only, or it will update to empty or null into the database	Accepted

Design Considerations

Goal: Create a new reservation.

Guidelines: Accepts customer name, phone number, email and number of guests as well as their preferred date and time and then generates a reservation id. It also accepts the option of mode of communication while the date and time allows only time divisible by 30 minutes. Then, system should send confirmation notification to the customer based on their preferred mode of communication.

Goal: View all the reservation of the customer.

Guidelines: Lists all the customer reservations based on the customer's name, displaying both active and cancelled, as well as past and future reservation

Goal: Update customer reservation.

Guidelines: Update the reservation date and time, and the number of guests given the customer's reservation id. Then send notification to the customer's preferred mode of communication that the update is successful.

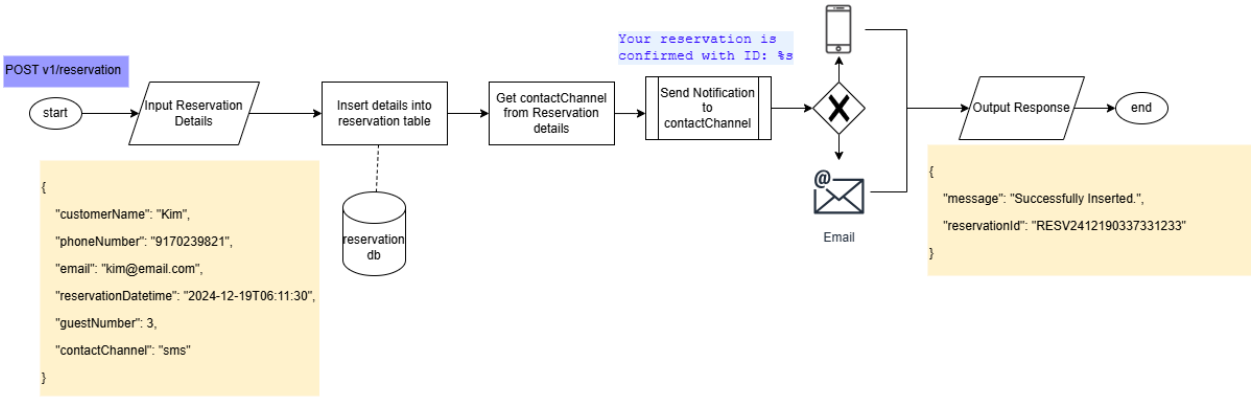
Goal: Cancel customer reservation.

Guidelines: Allows customer to cancel their scheduled reservation providing customer's reservation id. Then sends notification to the customer's preferred mode of communication that the cancellation is successful. Then once reservation is cancelled, it cannot be re-activated.

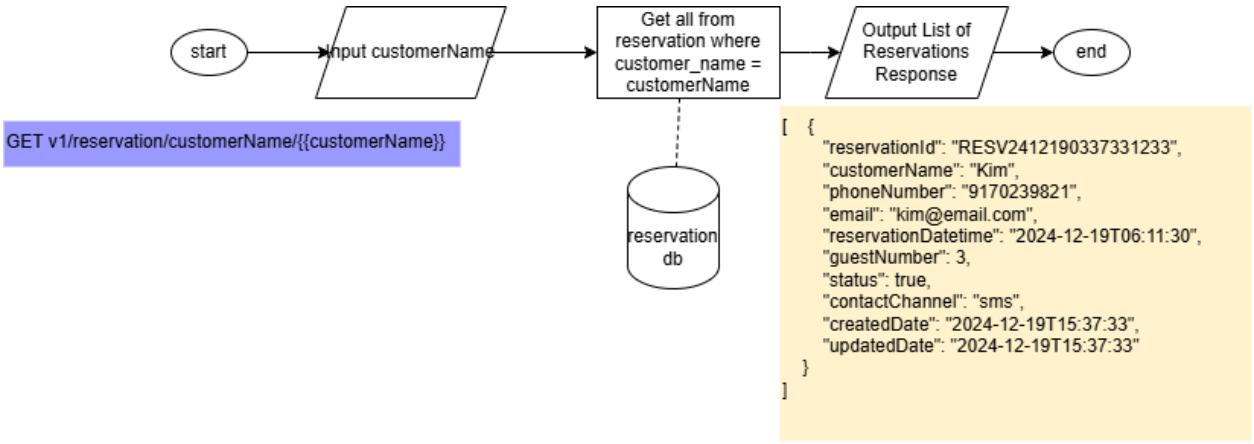
Goal: Send reminder 4 hours prior to the customer scheduled reservation.

Guidelines: System to run a schedule task every 30 mins and checks all reservations that are scheduled 4 hours prior with statue true. Then sends reminder to all those customers with upcoming schedule via their preferred mode of communication.

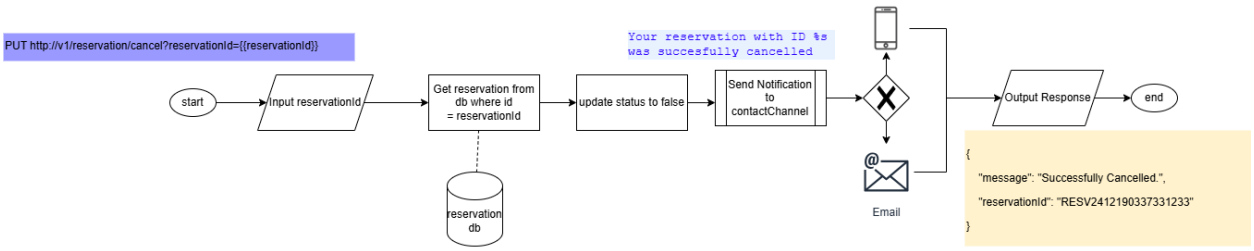
System Design



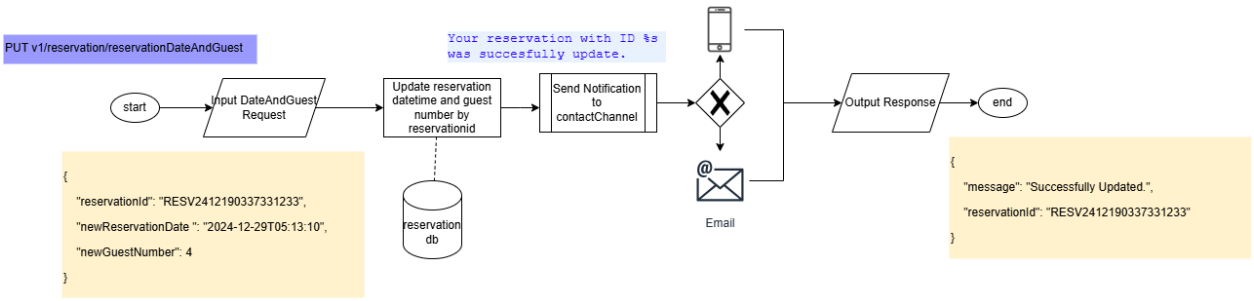
Create Reservation API



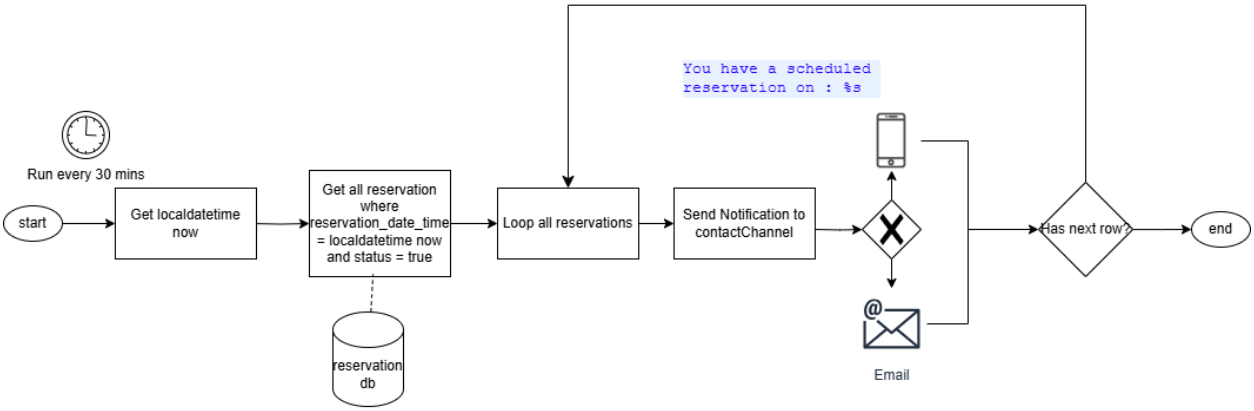
Retrieve All Reservation by Customer Name API



Cancel Reservation API



Reservation datetime and Guest Number Update API



Reminder System