Computer Engineering Department

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UNIVERSITY OF MUMBAI

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A Project Report on

Restaurant Table Reservation System

Submitted in partial fulfillment of the degree of
Bachelor of Engineering(Sem-7)
in
Computer Engineering

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Under the Guidance of
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1.Project Conception and Initiation

Restaurant Table Reservation System

1.1 Abstract

- Restaurant table reservation system is an android application that can affectively improve their restaurant table reservation system in order to provide direct access of every user to the management. It has given the benefits of effective booking corridor or to hold their accessible table with holding up through an android application.
- Restaurant table reservation involved the use of two applications associated with each other, and involved the use of five modules which are the reservation, the order take away your order, gallery and get in touch with us.
- The major goal of this task was to enable the administrative representative of organization of a restaurant to deal directly with the clients. In addition, it can place client's requests to discover free tables as indicated by their own need of particular required number of seats in his choice area.

1.2 Objectives

- The key objective of current project was to allow the management administration and employees of a restaurant to grip the customers to place their orders and to find free tables according to their required number of seats.
- Restaurant table reservation system app will enable the user to access and manage the arrangements of table .
- The general objective of Restaurant table reservation system was to build up a reservation system for table reservation to assist workers with solving basic issues with their manual reservation system for example utilization of time and vulnerability. And for the customer to Pre-Book the table

1.3 Literature Review

- 1.https://ieeexplore.ieee.org/abstract/document/5513147-An Automated FoodOrdering System using Interactive User Interface approach was created to improve the current food ordering system.
- 2.https://ieeexplore.ieee.org/document/7058749-To manage the crowd and eliminate the problem of waiting time, we have designed and proposed an application for the customer to pre-book the table at specific time.
- 3.https://ieeexplore.ieee.org/document/5288330-This paper presents an integration of wireless communication technologies and web services technologies to realize a wireless food ordering system. In this system, it implements wired and wireless data access to the servers and food ordering functions through both desktop PCs and mobile devices such as PDAs over a wired/wireless integrated local area network

1.4 Problem Definition

- Restaurant is a kind of business that serves people all over world with readymade food. Currently this industry is going on with lot of flare the main problem with today’s Restaurant Management is the waiting problem.
- As sometimes so happens that sometimes their customers are more than hotel’s capacity so the customer has to wait. So, it can become Tedious and time is wasted.
- And for the hotel to keep all the reservation in the register were not easy as it was time consuming and the hotel was not able to keep record. Restaurant manage their business by manual especially take customer reservation.

1.5 Scope

- The scope of this project is to build an application for reserving tables for restaurants. Through restaurant reservation system online, users can be allowed to take reservations quickly and easily.
- It will not only help the customer but also help the restaurant to manage and serves customer easily. The manager doesn't have to maintain a guest book anymore. The manager can see who is coming and at what time. In that they are aware about which tables have been booked
- The sole objective of the proposed system is to eliminate the wait time of the customer, enhance the customer eating experience and manage the large number of customers by the restaurant. Restaurant table reservation system is an android application That can affectively improve their restaurant table reservation system in order to provide direct access of every user to the management.

1.6 Technology stack

- **Software Requirement :**
  - WindowsXP,Windows7&Windows10 ,ios
  - Android studio
  - Firebase for Backend

- **Hardware Requirement :**
  - Android phone with kitkat and higher

1.7 Benefits for environment & Society

- **Benefits for environment**

As the project mentioned above is mainly an app so it does not require any work in written format on paper. So, which is very beneficial for environment as all data is saved in the app so there will be no need of paper which means less usage of paper. So, there will be less cutting of trees. As this project requires less energy so the consumption of electricity is reduced

- **Benefits for society**

- Rights are reserved at customer’s fingertips.
- During festive seasons, tables get booked shortly, in such cases clients can make advance booking for utilization of ordering framework.
- It saves client's time looking out for restaurants.
- It saves business assets and costs.

2. Project Design

2.1 Proposed System

- In proposed ordering system we provide facility customers to reserve tables for dining, and can also get details of hall availability for reservation of party and celebrations. At the same time this online reservation system will provide the restaurant owner to manage their services including food.
- Currently proposed system will be fast and easy to use and involves the application of five modules which are the reservation, Home, My Bookings , Profile , Review and About us .

- This system will managed by three main android applications, first one would be available for general customers for viewing and booking of table. Second would be used by the admin to manage Database and check the Email/User is Authorized third would be update seat availability and manage customers.

2.2 Design(Flow Of Modules)

- **It is divided in three modules:-**
- 1)**Android User**

  It does Registration,Login,Go to Home,Profile,Cuisine,Menu Card, View Table, Booking, Preview Booking, Cancel Booking, Review, Notification
- 2)_**Web Application**
- **Admin**

  It does Login,View Booking,Delete Users,View Users
- **Manager**

  It Logins,Update’s seat Availability,Cancel Reservation

2.3 Description Of Use Case

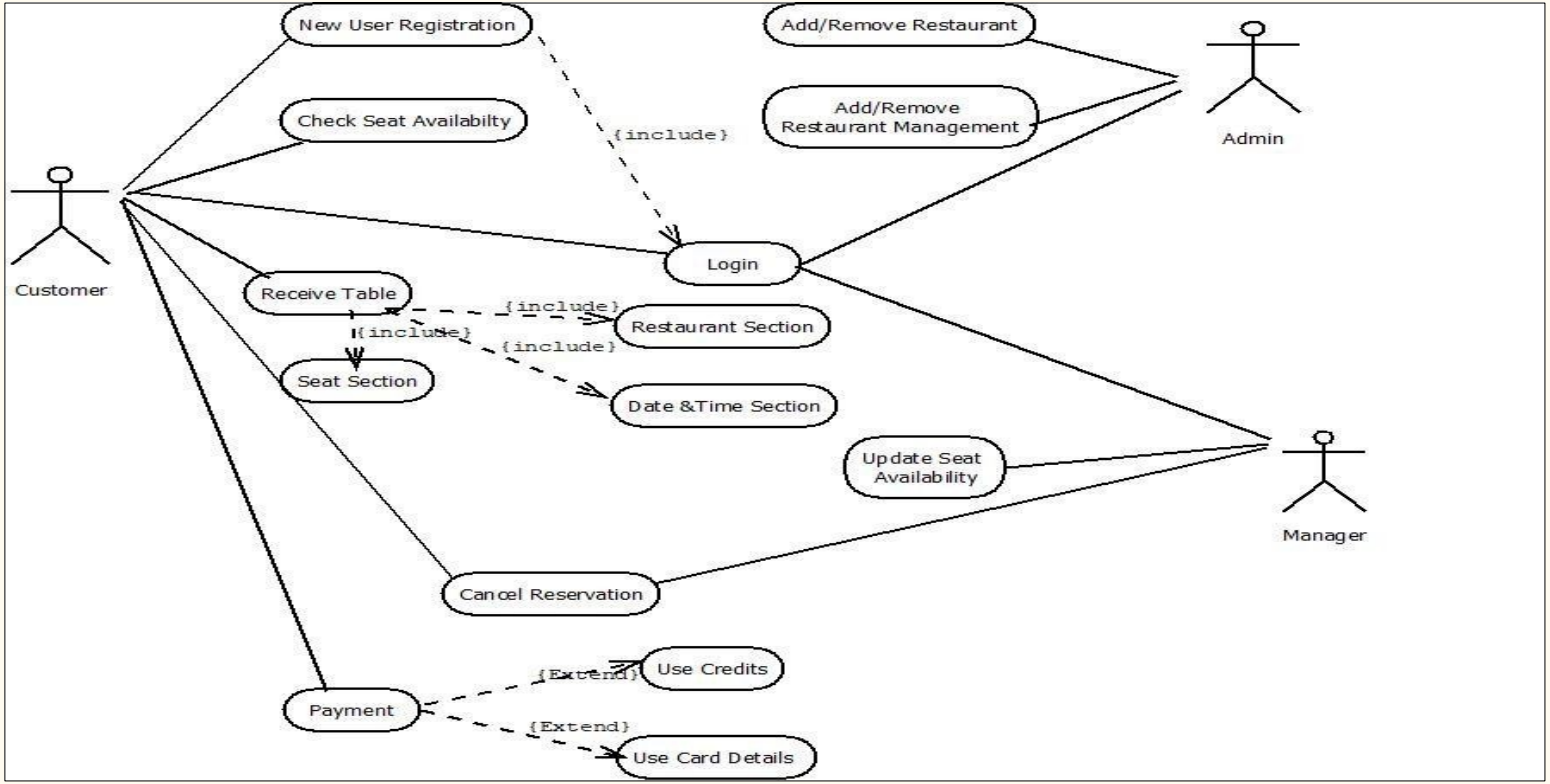
- A use case model is showing the functional requirements of a system. Functional Requirements are the system’s core requirements, without this system cannot be completed and maybe it useless. Below given use case shows three Primary actors that are directly interacting with the system.
- **Actors:**

Actors with their essentials are mentioned in the given Fig. Below:-

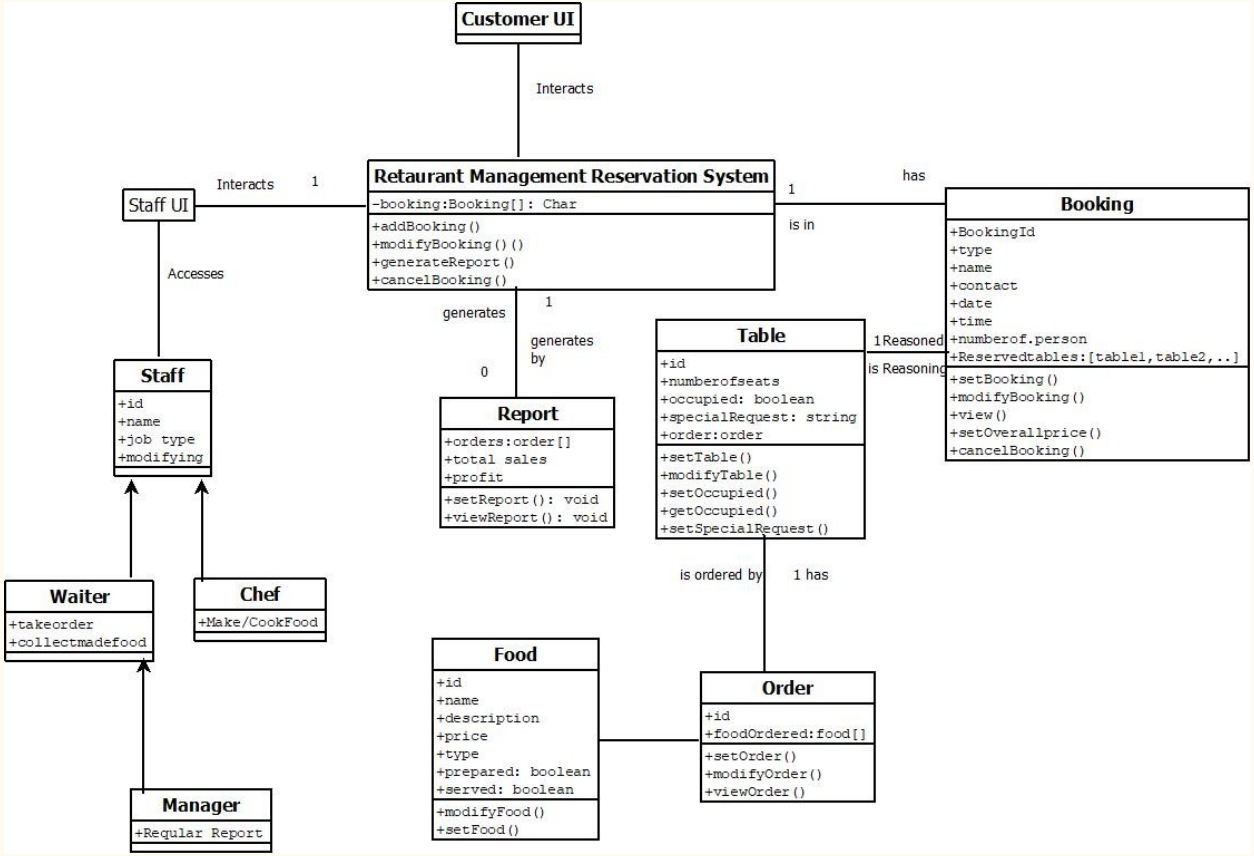
1. Admin
2. User
3. Manager

Functional requirement are one is online table reservation user can reserve any table through this application any time, second user can cancel booking when they need,, third user can contact with hotel Manager and last one is user can see hotel’s updated images from gallery.

2.4 UseCase diagram



2.5 Class Diagram



2.6 Module-1

Customer User

- **Registration:** To access the system, user needs to register with his/her basic registration details.
- **Login:** After successful registration, user can login using their valid username and password..
- **Profile:** User profile details will be displayed& also can update their contact number.
- **View Tables:** User will book from the available tables at the selected restaurant.
- **Reservations:** Here, user is shown current, previous and cancelled booking details.
- **Preview Reservation:** Once the admin updates as guest checked-out, the user will see a list of bookings that are yet to give his reviews.
- **Cancel Reservation:** User can cancel their booked tables whenever necessary.
- **Notification:** The system will give a notification regarding the booking an hour prior to users booking.

Module-2

Admin

- **Login:** Admin needs to login into their account to access the below given modules.
- **View Booking:** Admin can view all the booking details which is booked by the user.
- **View Tables:** View all the added Table and even can delete them.
- **View Users:** View all registered users.

Module-3

Manager

- **Login:** Once the restaurant details are registered, a concern person of restaurant can login using their login credentials.
- **Add Menu & Banner:** Add any number of menu with their images.
- **View Booking:** View booking of Restaurant can view its bookings.
- **Check-In Users:** Can enter check in time.
- **Checkout Users:** Can enter checkout timing for the checked in users
- **Cancel Reservation:** In Case any user cancels the booking.

2.7 References

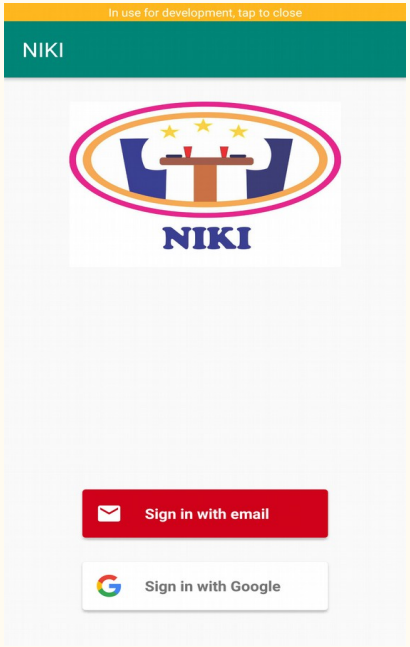
- 1.. Average Waiting Time, [Online] Available:https://www.foodnewsfeed.com/new-concepts/study-released-averagerestaurant-wait-times
- 2. Customer Satisfaction Study, [Online] Available: https://www.sld.com/blog/food-service/strategies-to-reduce-frustrationaround-restaurant-wait-times
- 3. N. Rianthong, A. Dumrongsiri and Y. Kohda, "Maximizing service value: A casestudy of online hotel reservation," 2014 IEEE InternationalConference on IndustrialEngineering and Engineering Management, Bandar Sunway, 2014, pp. 803-807.
- 4. M. A. Habib, M. A. Rakib and M. A. Hasan, "Location, time, and preference awarerestaurant recommendation method," 2016 19thInternational Conference onComputer and Information Technology(ICCIT), Dhaka, 2016, pp. 315-320.
- 5. S. Amano, K. Aizawa and M. Ogawa, "Food Category Representatives: Extracting Categories from Meal Names in Food Recordings and RecipeData," 2015 IEEEInternational Conference on Multimedia Big Data,Beijing, 2015, pp. 48-55.

3.Planning for next semester

Planning

To create and Implement android application using java in the next semester.

Snapshot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NIKI
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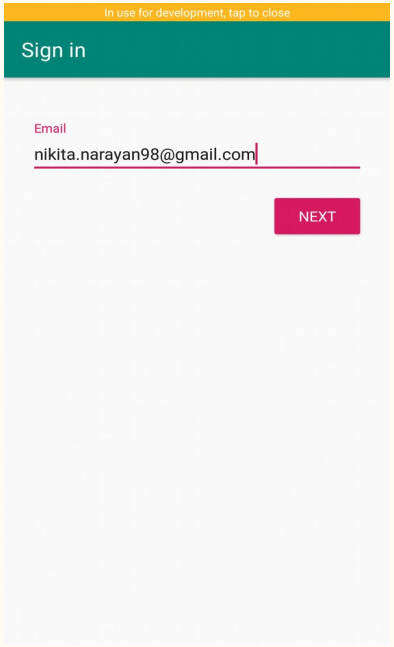
Sign in with email
Sign in with Google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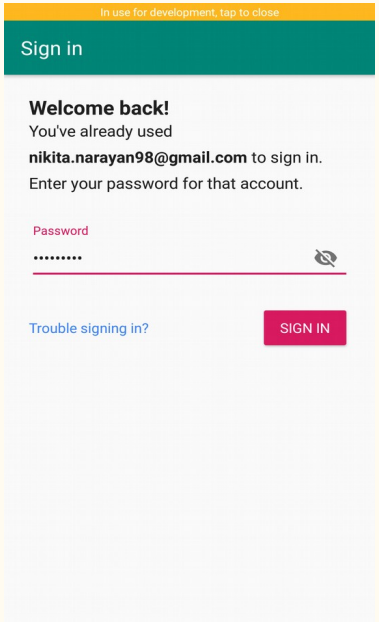
nikita.narayan98@gmail.com
NEXT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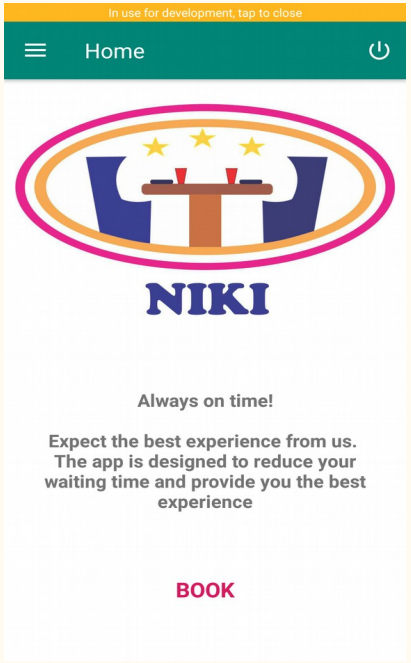
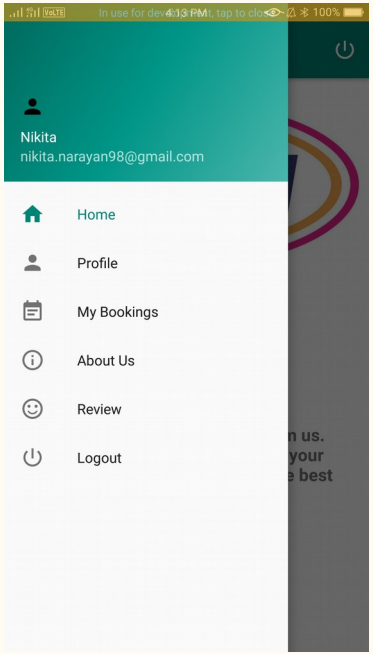
Sign in
Welcome back!
You've already used
nikita.narayan98@gmail.com to sign in.
Enter your password for that account.
Password
Trouble signing in?
SIGN IN


In use for development, tap to close
Home
NIKI
Always on time!
Expect the best experience from us. The app is designed to reduce your waiting time and provide you the best experience
BOOK

Snapshot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Thank You