

A Project Report on

Restaurant Table Reservation System

Submitted in partial fulfillment of the requirements for the award
of the degree of

Bachelor of Engineering

in

Computer Engineering

by

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Academic Year 2019-2020

Approval Sheet

This Project Report entitled “***Restaurant Table Reservation System***” Submitted by “***Kiran P Kedar***”(15202005), “***Nikita N Bhalekar***”(15202015) is approved for the partial fulfillment of the requirement for the award of the degree of ***Bachelor of Engineering*** in ***Computer*** from ***University of Mumbai***.

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Place: A.P. Shah Institute of Technology, Thane

Date:

CERTIFICATE

This is to certify that the project entitled “***Restaurant Table Reservation System***” submitted by “***Kiran P Kedar***” (15202005), “***Nikita N Bhalekar***” (15202015) for the partial fulfillment of the requirement for award of a degree ***Bachelor of Engineering*** in ***Computer.***, to the University of Mumbai, is a bonafide work carried out during academic year 2019-2020.

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Declaration

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, We have adequately cited and referenced the original sources. We also declare that We have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature)

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Abstract

The Restaurant presently runs a manual reservation system and as customers are desirous to find a handy application for reservation of tables or any other services to avoid physical walking to the hotel or contacting by call or reserving through a middle man. for table reservation and online booking system. 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 effectively booking of the table of their choice through an android application. Restaurant table reservation involved the use of two applications associated with each other, and involved the use of seven modules which are the Home, My Booking, Profile, About Us, Menu/Gallery, Review, Logout. 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. This application can assist to avoid holding up time spend at the restaurant. We utilized database to accomplish current task to deal with the historical backdrop of the Resturant reservation and clients records. Client can see the history and also like wise delete data. Restaurant table reservation system can enhance the popularity of restaurant among their intended customers coupled with speedy and direct service availabilities. .

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List of Abbreviations

RTRS: Restaurant Table Reservation System

PU: Primary Users

CRN: Cognitive Radio Networks

RT: Reservation Table

Chapter 1

Introduction

Long wait time for tables can turn the customers away or can create revulsion towards the restaurant, many of people even argue that the restaurant makes them wait unnecessarily. RTRS give a proper solution to the problem by allowing them to pre-book the table online. While it is appropriate to give customer a chance to look at the menu and decide their order, but it is not ideal if they feel like they are being ignored when the sta is too busy to attend them. This creates a dislike towards the restaurant. Our proposed application will reduce the load of the sta to attend them by taking order online at the time of booking. A reservation is a promise between the diner and the restaurant. Sometime customer shows up late for their table and the restaurant cancel their reservation, the customer has to wait for another table to available even after they have reserved. RTRS will inform the restaurant if there is a change or delaying the reservation from the customer side...

1.1 Objective

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 and 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 and food. 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, cash and vulnerability. And for the customer to Pre-Book the table.

1.2 Problem Defination

Restaurant is a kind of business that serves people all over world with readymade food. Currently this industry is going on with lot of are the main problem with todays Restaurant Management is the waiting problem. As sometimes so happens that sometimes their customers are more than hotels 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.

1.3 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. The proposed system also provides additional optional features for customer to reserve which food to eat from home and reserve table through the application by just paying a booking amount to save their valuable time. 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 system will also notify the customer if there is a delay for their reservation by the restaurant, it will help the customer to re-schedule their reservation. 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 aectively improve their restaurant table reservation system in order to provide direct access of every user to the management. This application can assist to avoid holding up time spend at the restaurant.

1.4 Technology Stack

Software Requirement : WindowsXP, Windows7 ,Windows10 Android studio Firebase

Hardware Requirement : Android phone with kitkat and higher

1.5 Benefits For Environment And 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 customers 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.

1.6 Applications

The Restaurant Table Reservation is used to people have different mindset, sometimes they Don't want to miss their favourite restaurant on their very special day or occasion so they like to book a table for the decided number of people. It significantly time saving and gives one a sense of relaxation. Sometimes we have an important meeting or a business gathering, which we want to keep in any exclusive and peaceful ambiance so we book for a suitable restaurant and make the arrangements according to the event. This controls ow of information for owner and Manager and enhance better table management which results an overall improved Management of the Restaurant.

Chapter 2

Literature Review

1.Average Waiting Time of Packets with Different Priorities in Cognitive Radio Networks

Authors:Hung Tran, Trung Q. Duong, and Hans-Jrgen Zepernick

About The Paper: In this paper, we investigate the average waiting time of packets with different priorities in cognitive radio networks (CRN) using a pre-emptive priority queuing system. Specially, we consider two scenarios for CRN, the first with the secondary user (SU) sensing at the beginning of each timeslot and the other with the SU having continues sensing ability. Our analysis shows that the average waiting time of packets for the SU does not only depend on the size of packets and arrival rate of the SU traffic but also depends on the arrival rate and size of packets from primary users (PU). Moreover, the results show that an SU with continuous sensing ability can utilize spectrum better than sensing at the beginning of each time slot.

2.Maximizing Service Value: A Case Study of Online Hotel Reservation.

Authors: Napaporn Rianthong ^{1,2} , Aussadavut Dumrongsiri ¹ , Youji Kohda

About the paper: This research studies the customer behaviour in an online hotel reservation in which a hotel differentiates the same room service with different sale conditions: (i)Restriction Condition, (ii) Mild Condition, (iii) Last Minute Condition. Customers face un-certainty about their plan, and they are charged with cancellation fee. Customer utility is developed and demand function is derived. Then, the optimal prices for different conditions are determined to maximize hotels profit, and achieve customer saving. From numerical experiment, offering three sale conditions, hotel could increase profit 7.6 offering the restriction and last-minute conditions, and 6.6compared with offering the mild and last-minute conditions. Three sale conditions could generate an average customer value of 40. 26conditions.In addition, customer saving when cancel the reservation of 34.49restriction and last-minute conditions.

3. Location, time, and preference aware restaurant recommendation method

Authors: Md. Ahsan Habib, Md. Abdur Rakib, and Muhammad Abul Hasan

About the paper: The location-based social networks introduce a platform to understand the users' preferences. In general, the users of the social networks promote the exchange of data within their own networks. Such data are being used in the literature for a wide variety of location-aware recommendation systems. In this paper, we propose a novel location, time and preference aware restaurant recommendation method using the users' current geospatial location, historical check-in data of the users, and the time of the recommendation request. In the proposed method, users' check-in histories are analyzed individually to discover users' visiting trends, food preference trends, and overall popularity of the restaurants. At the same time, each restaurant's operation time and the distance are modeled separately to compute recommendation scores of the restaurants. The recommendation scores are computed by considering four key factors, namely, i) user's preference scores, ii) the distance of the restaurants, iii) the time of a day, and iv) the popularity scores of the restaurants. Each of these key factors is modeled carefully to estimate realistic recommendation scores for the restaurants in a given geospatial range. We tested our proposed method using an available online dataset. The experimental results confirm the effectiveness of the proposed method.

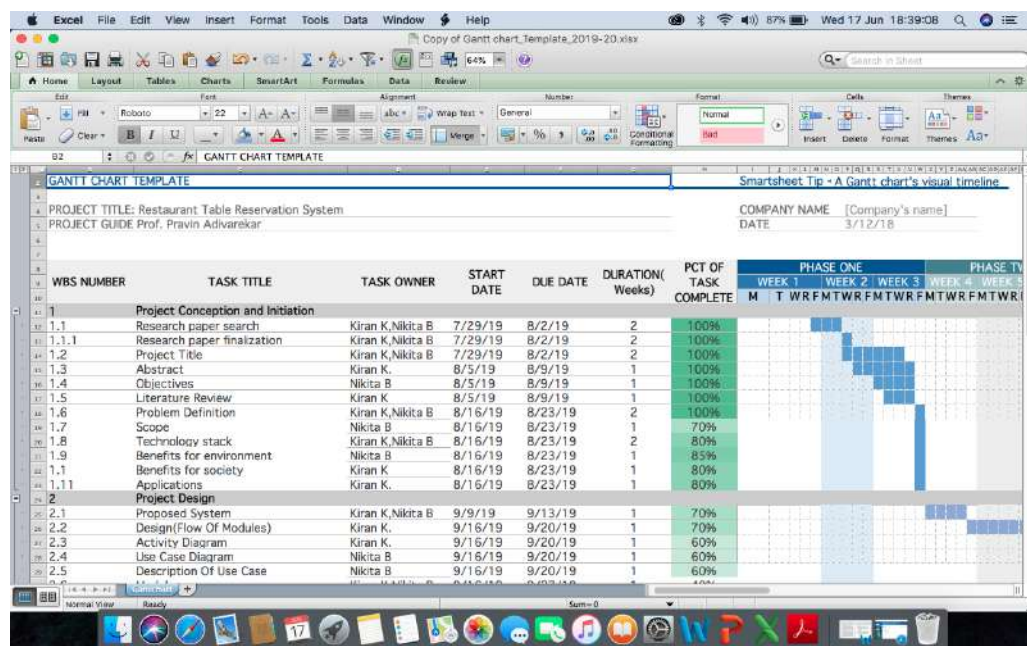
4. RTGEN: An Algorithm for Automatic Generation of Reservation Tables from Architectural Descriptions

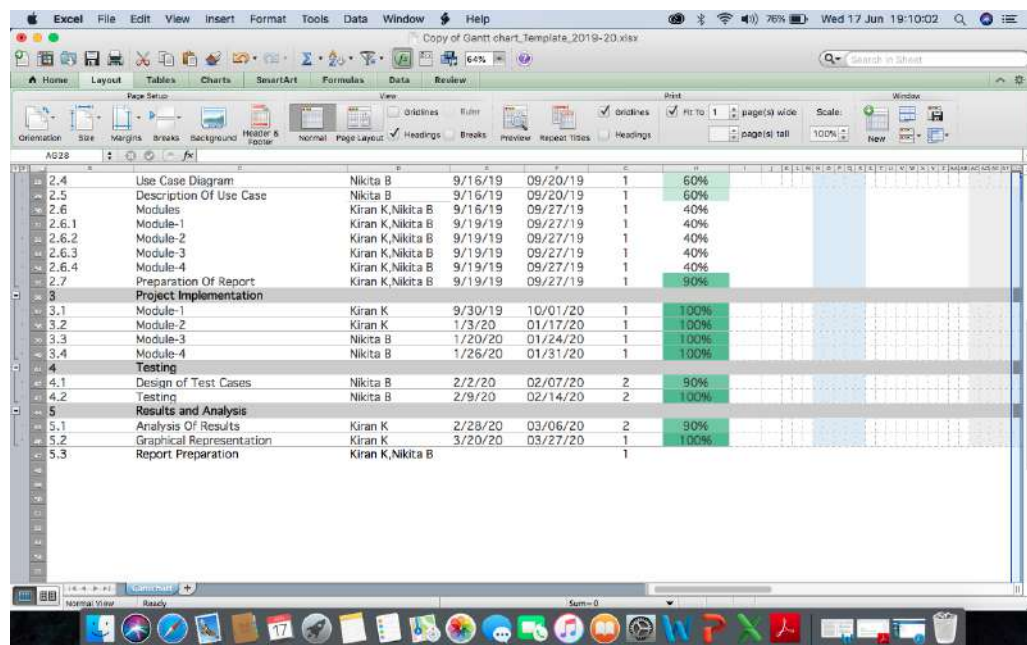
Author: Peter Grun Ashok Halambi Nikil Dutt Alex Nicolau

About The Paper: Reservation Tables (RTs) have long been used to detect conflicts between operations that simultaneously access the same architectural resource. Traditionally, these RTs have been specified explicitly by the designer. However, the increasing complexity of modern processors makes the manual specification of RTs cumbersome and error-prone. Furthermore, manual specification of such conflict information is infeasible for supporting rapid architectural exploration. In this paper we present an algorithm to automatically generate RTs from a high-level processor description, with the goal of avoiding manual specification of RTs, resulting in more concise architectural specifications and also supporting faster turn-around time in Design Space Exploration. We demonstrate the utility of our approach on a set of experiments using the TI C6201 VLIW DSP and DLX processor architectures, and a suite of multimedia and scientific applications..

Chapter 3

Gantt Chart





Chapter 4

Project Design

4.1 Proposed System

In proposed ordering system we provide facility customers to reserve tables for dining, and can also get details of availability of reservation table for party and celebrations. At the same time this online reservation system will provide the restaurant manager to manage the customer's detail and reservation. Currently proposed system will be fast and easy to use and involves the application of six 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 Manager who would update seat availability and manage customers.

4.2 Design

It is divided in two modules:-

1)Android User

It does Registration ,Login ,Go to Home , Profile, Cuisine, Restaurant Page,View Table, Booking,Preview Booking,Cancel Booking,Review, Notification,Payment

2) Web Application

I)Admin

It does Login,View Booking,Add Restaurant,View Restaurant,View Users

II)Manager

It Logins,Updates seat Availability,Cancel Reservation

4.3 Use Case Diagram

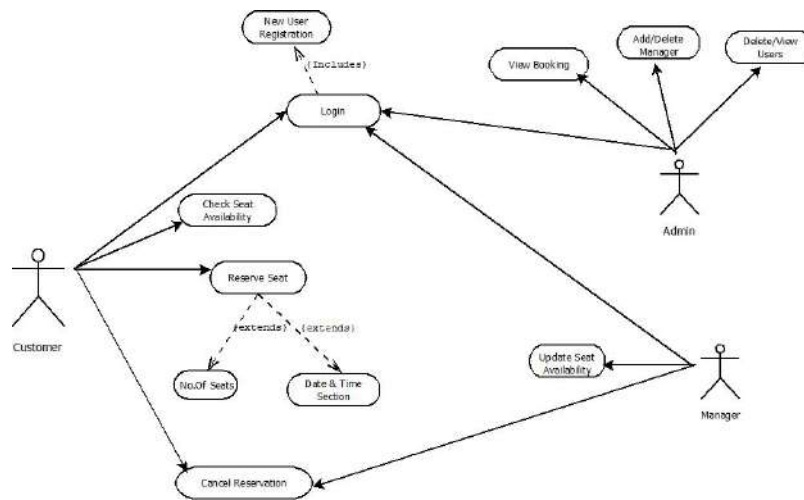


Figure 4.1: Use Case Diagram

4.3.1 Description of Use Case

A use case model is showing the functional requirements of a system. Functional Requirements are the systems 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. Customer

3. Manager

Functional requirement are one is online table reservation user can reserve any table through this application any time, second user can book table using this app also cancel booking when they need, third user can order their favorite seats using this application, fourth user can contact with hotel admin and last one is user can see all hotel updated images from menu.

4.4 Class Diagram

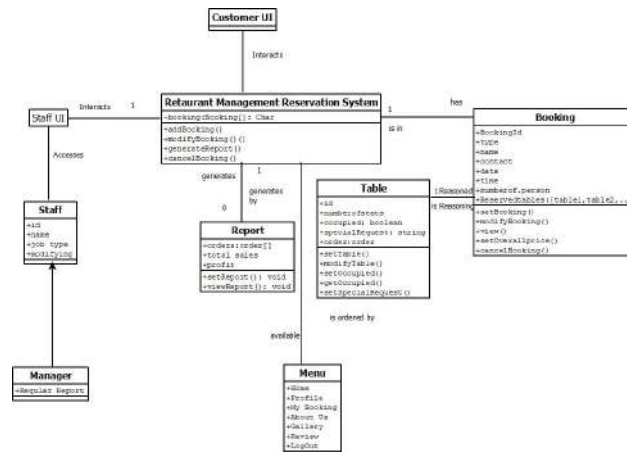


Figure 4.2: Class Diagram

4.5 Sequence Diagram

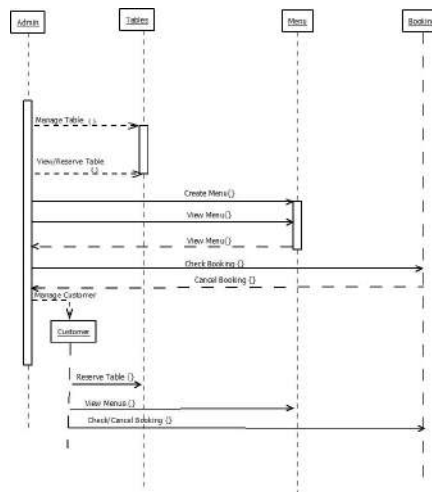
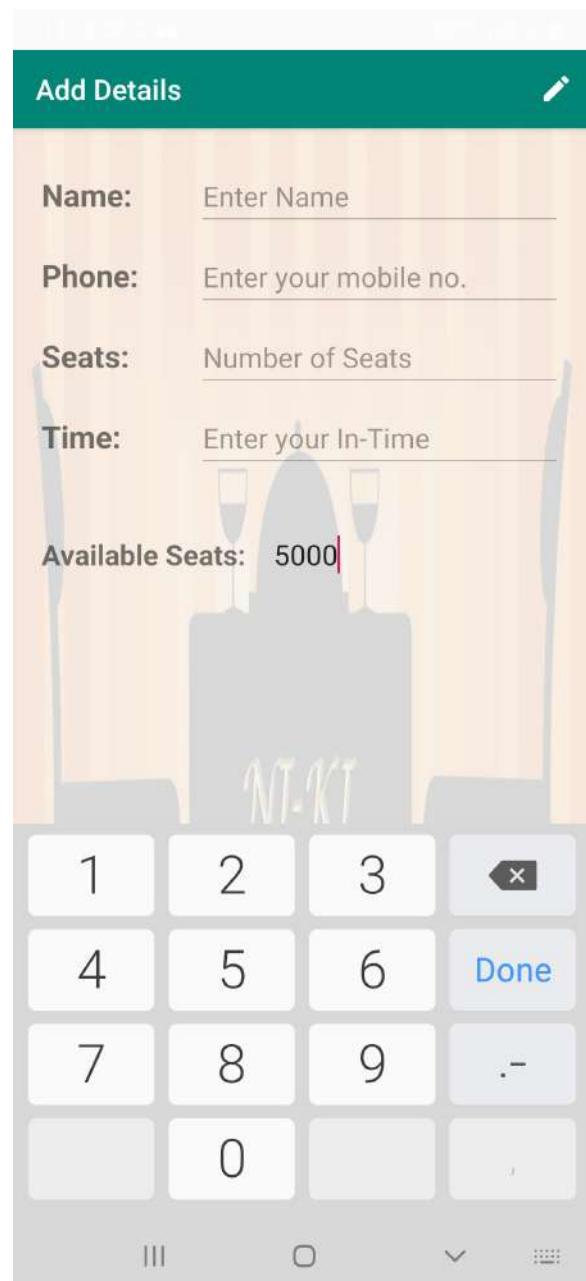


Figure 4.3: Sequence Diagram

Chapter 5

Result

The project user enters the individual points of interest to get a record which is should have been utilized in the Android App. The client can see the sustenance. This will enable the client to save a table and the reservation subtle elements are sent to the email ID of the client. The results and output screens are shown in the following Figures:



14:14

Add Details

Name: Enter Name

Phone: Enter your mobile no.

Seats: Number of Seats

Time: Enter your In-Time

Available Seats: 5000

NI-KI

✓

14:14

Add Details

Name: komal

Phone: 5896247898

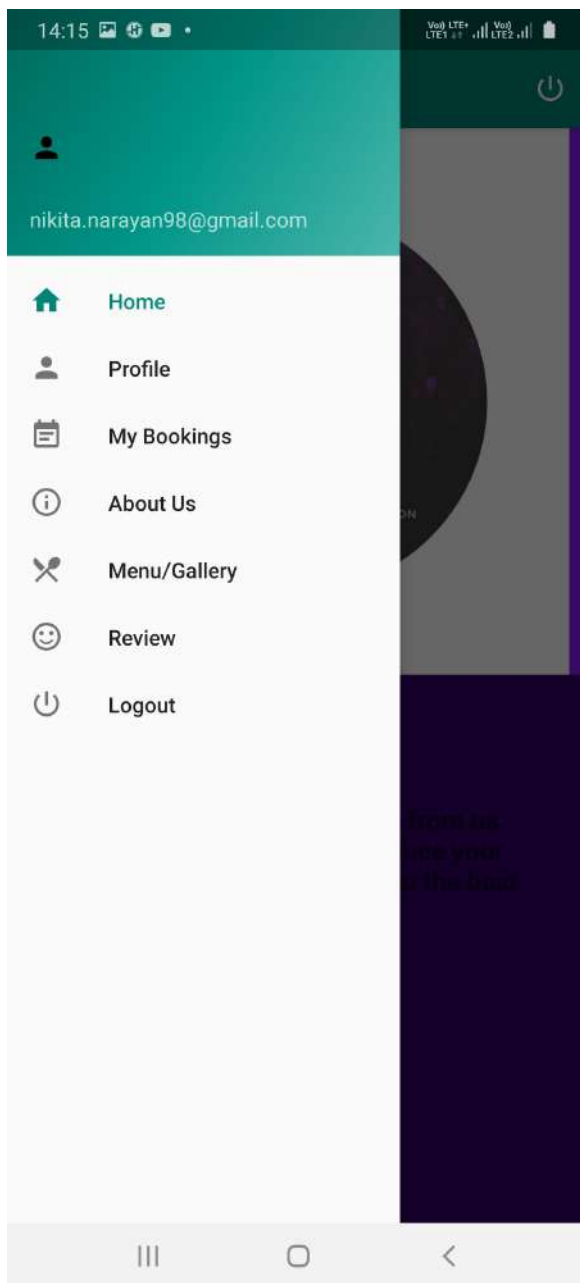
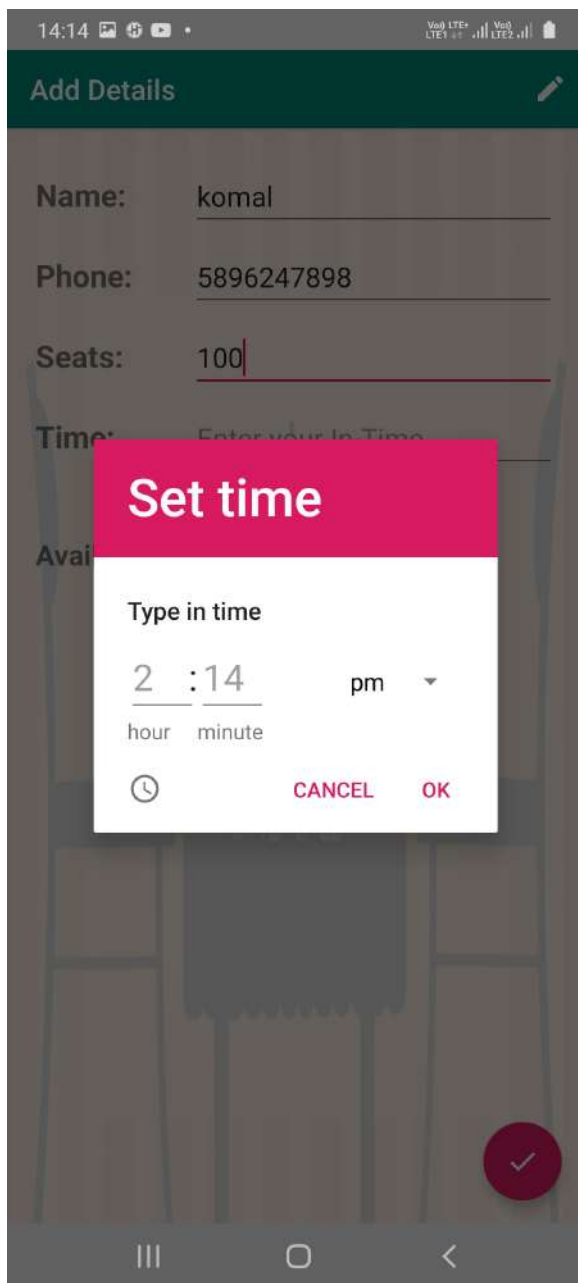
Seats: 100

Time: 2:14 AM PM

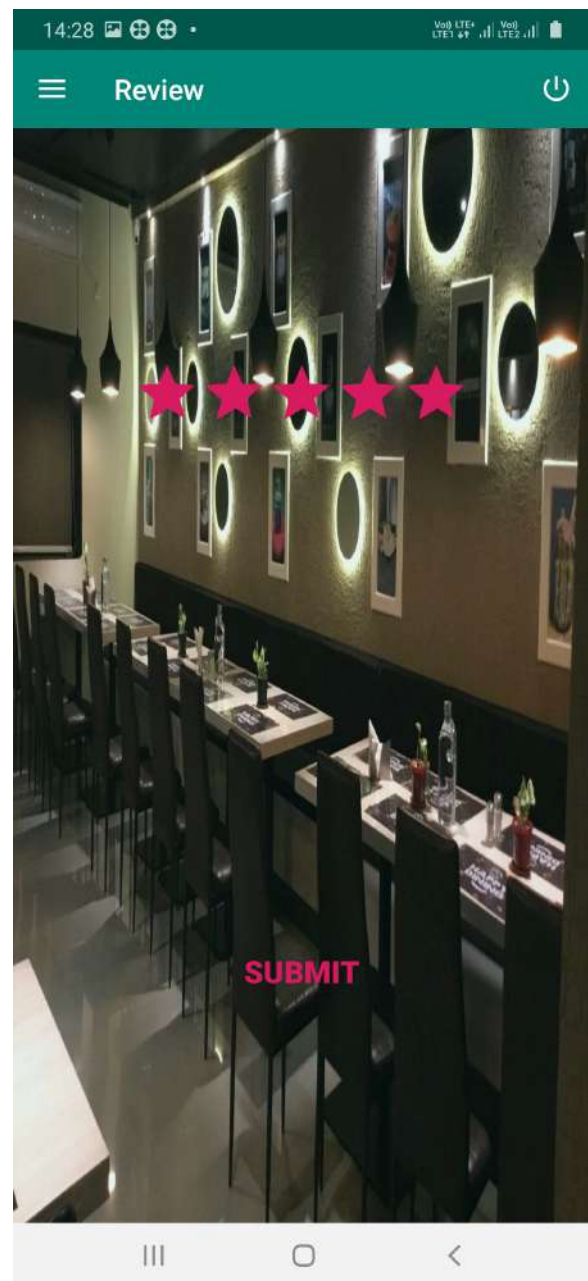
Available Seats: 5000

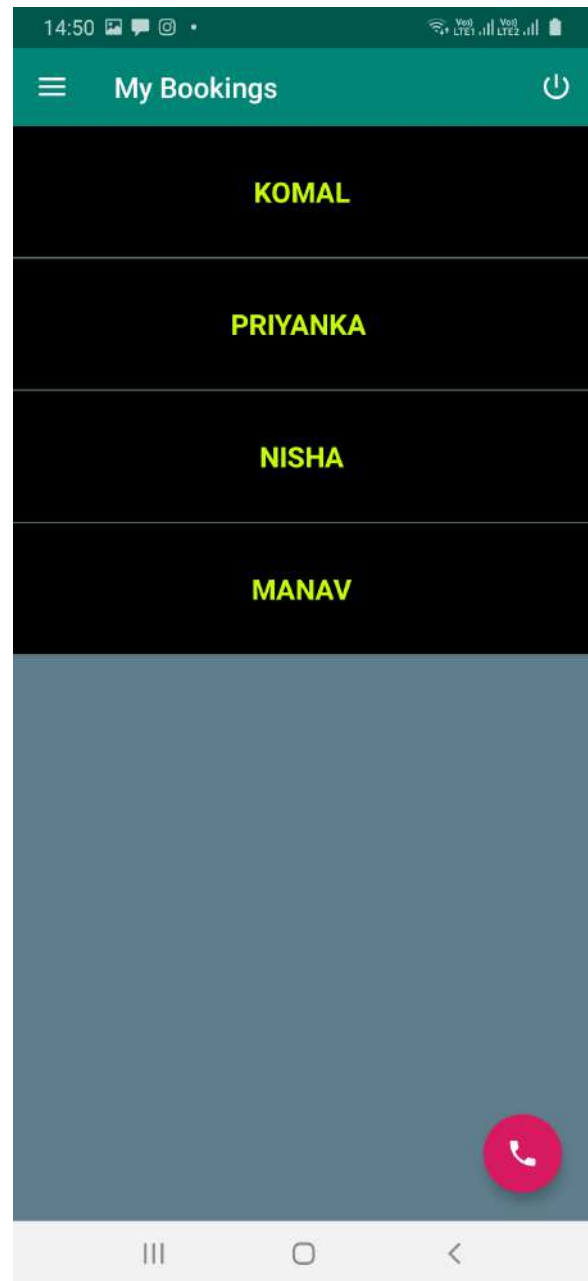
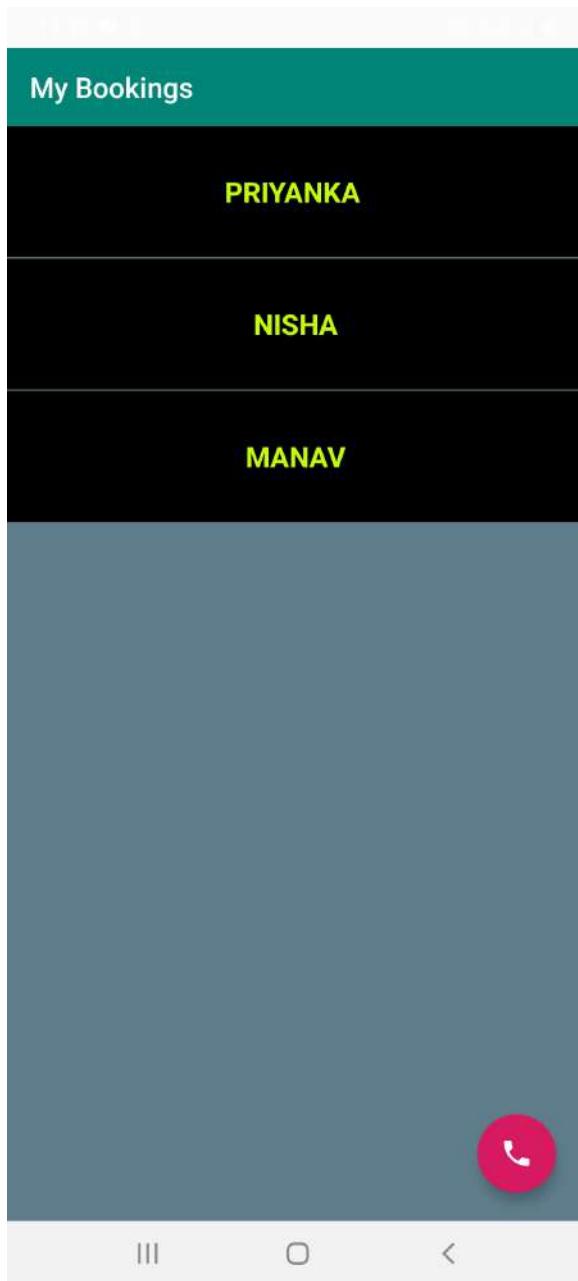
NI-KI

✓









14:54

Sign up

Email

nisha.narayan985@gmail.com

First name & surname

Nisha B

Password

.....

SAVE

Add Details

Name: Ajay

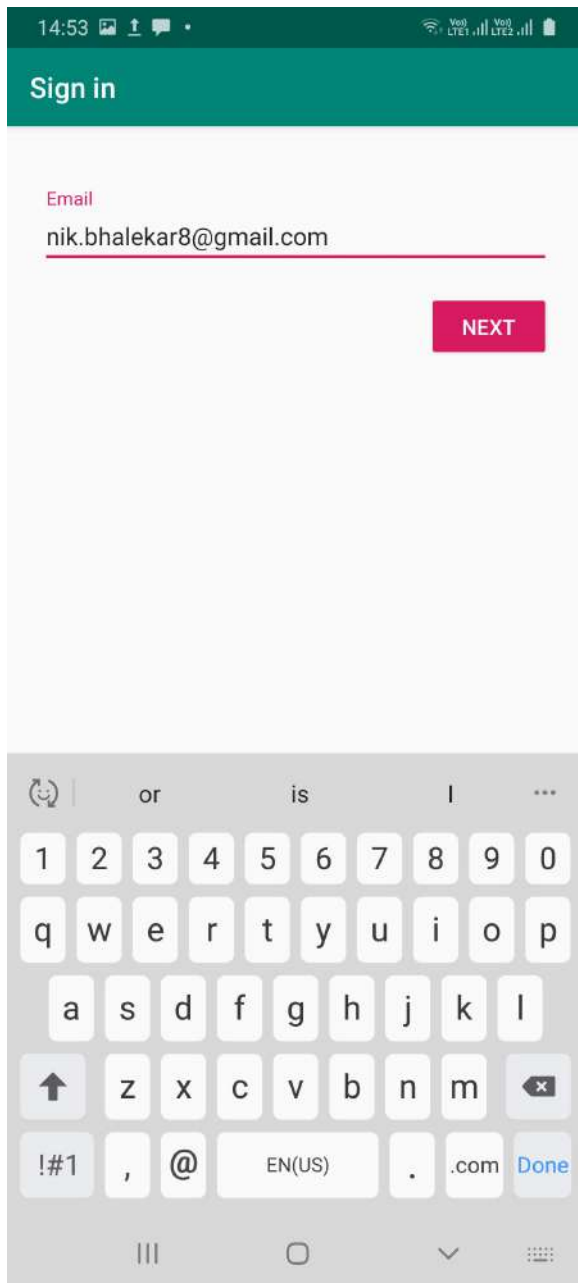
Phone: 9652387409

Seats: 10

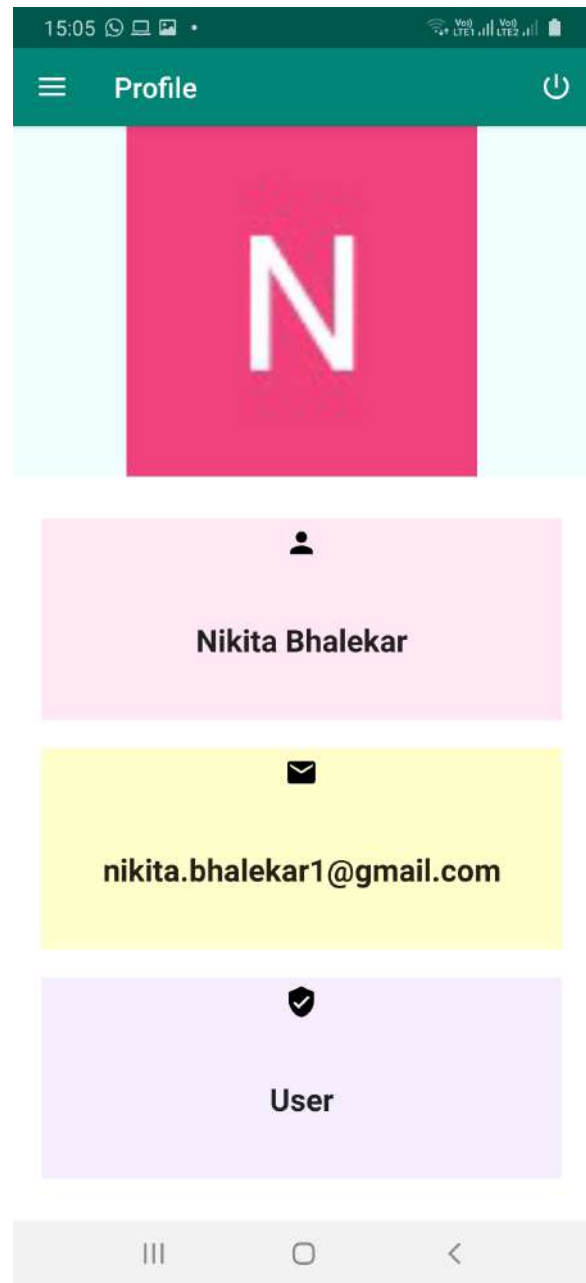
Time: 18-06-2020 04:52 am

Available Seats: 4610

✓



14.jpg



Chapter 6

Conclusions and Future Scope

Using this project it will be possible that if a customer is willing to visit the restaurant and he finds no table is available for the dinner/lunch then he/she has to wait long for the table availability. With the help of this app user can choice the tables location according to their need and willing.

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Appendices

Detailed information, lengthy derivations, raw experimental observations etc. are to be presented in the separate appendices, which shall be numbered in Roman Capitals (e.g. Appendix I). Since reference can be drawn to published/unpublished literature in the appendices these should precede the Literature Cited section.

Appendix-A: Android Studio Download and Installation

1. Download Java Platform (JDK) and install it on your computer. Once completed, then proceed to the next step. Java is important for the functioning of Android Studio.
2. Download Android Studio (android-studio-bundle-XX.XXXXXXX-windows.exe) from the Android Developers website. This may take a while to download as the entire set up is about 2GB in size..
3. Run the EXE setup file you just downloaded. You should be greeted with a similar setup wizard screen as shown below. Click Next to begin!
4. Keep the default components selected for installation. Click Next.
5. We are sure you would not want to read through the entire license agreement. Click I Agree.
6. This is where you select the installation location for Android Studio and Android SDK. You may select another location / drive that has the required space available. Click Next to continue.
7. Yes, you would want to have to a Start menu folder. Just click Install to continue.
8. Installation should begin now. This may take a while for all the files to be extracted and installed to your computer.
9. Once the installation is completed, click Next.
10. Yep, this is it. You are all set to launch Android Studio for the first time. Click Finish to proceed.

Acknowledgement

We have great pleasure in presenting the report on **Restaurant Table Reservation Table**. We take this opportunity to express our sincere thanks towards our guide **Prof. Pravin P Adiverekar** & Co-Guide **Prof Amol Kalugade** Department of Computer, APSIT thane for providing the technical guidelines and suggestions regarding line of work. We would like to express our gratitude towards his constant encouragement, support and guidance through the development of project.

We thank **Prof. Sachin H. Malave** Head of Department, Computer, APSIT for his encouragement during progress meeting and providing guidelines to write this report.

We thank **Prof. Amol Kalugade** BE project co-ordinator, Department of Computer, APSIT for being encouraging throughout the course and for guidance.

We also thank the entire staff of APSIT for their invaluable help rendered during the course of this work. We wish to express our deep gratitude towards all our colleagues of APSIT for their encouragement.

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Publication

Paper entitled “**Restaurant Table reservation using time-series prediction**” is presented at “**Department of Computer Engineering Rizvi College of Engineering Mumbai, India**” by “**Varsha Shah**”.