

Abstract

In this project, a Restaurant Reservation App will be developed that will allow users to view real-time restaurant table availability, and book tables interactively simply by touch on their app screen. Before actually writing the project, a background research and critical reviews needs to be looked at in other similar systems that are out there and review them and talk about how it all relates to my project. Literature review aims to cover these areas in general and leads to a functional requirements specification to give a starting point in developing my app.

Table of Contents

Abstract	1
Table of Contents	1
Introduction	3
Project motivation	3
Aims and objective.....	3
Existing Systems	4
Telephone Reservation.....	4
Online Reservation.....	4
History of online table Reservation	4
Similar applications	5
EXAMPLE 1. CINEWORLD	6
EXAMPLE 2. RESDIARY.....	6
EXAMPLE 3- Stadium Seats Booking system.	7
Choice of Hardware and Software	8
Software interface.....	8
Location and Map service.....	8
Hardware	8
Choice of Programming Language.....	9
Firebase	9
Targeted Users	9
Android users.....	9
Restaurant Owners	9
Conclusion.....	10
Bibliography	11
Functional Requirements Specifications.	12
Appendix.....	15

Project contract	15
Project Plan-Gantt Chart.....	19
Ethical Review Form	20
Global Checklist	22
BCS accreditation checklists	24

Introduction

[Project motivation](#)

Being a computer science student and learning different programming languages throughout the previous years, out of all the other languages Java has always been one of my favourite language. My interest towards java expanded when I found out that most of the apps and games are developed using java. As developing apps and games is a subject that I am interested making my career in, this project will give me an opportunity to explore the world of android apps and expand my knowledge more. Moreover, my motivation for developing this android application came from my family who are involved in restaurant business sector. Whenever I decide to go and help the family run restaurant in busy times, there always seem to be some sort of problem with double bookings and not enough table for 'walk in' customers. Even though the restaurant could only sit 60 customers at once, you can't really predict when the customers will leave the table for another booking. Having a little knowledge of how the restaurant works, I believe that every owner of restaurant would want their business to rise economically, and in every restaurant, the more customer means more business. So, I decided to develop an application which could ease any type of restaurants booking system. This application wouldn't allow any double bookings to occur which will satisfy the owners as well as satisfying the customers as they could choose their own favourite table of their choice. This could also help the business growth both economically and widely recognisable.

[Aims and objective.](#)

In this Project, I will be developing an android application which will be a restaurant reservation app. Before getting into the development of the application, firstly I will have to do my interim report which will be literature review and functional requirements for the project that I will be developing. The core objective for interim report will mainly focus on the literature review and functional requirements which will contain the following:

- Researching the History of the online reservation, how it started and how it has been successfully developing throughout the years.
- It will also examine other similar applications, which uses similar concepts and services.
- The review will also investigate the problem areas which can or might occur in the project, and talk about what action could be taken to prevent those problems.
- Functional requirements for Admin application.
- Functional requirements for Users application.

As an appendix, the report will also contain all the work which has been undertaken to the date which are as follow:

- Project contract
- BSc checklists, Global checklist, ethical issue form and project plan (Gantt chart).
- Progress periodic report.

Existing Systems

Restaurants nowadays are commonly taking online reservations for their clients, especially fine dining. Many restaurant owner believes that this service has become an integral part of the service for now to operate the Restaurant businesses as it comes with multiple of benefits.

Telephone Reservation

Telephone reservations are very commonly used in any types of restaurants. Telephone reservation has many benefits for customers and the restaurant itself as reserving table through the phone can allow customers to have personal connection with the restaurant owners. however not bookings through phone calls aren't always the best ideas as it will also have a lot of drawbacks. Some of the disadvantages of telephone reservations are as follow:

- It may be difficult to arrange the needs of the customers' demands in busy times.
- It is only operated in opening times of the restaurants.
- There might be cause of double bookings and other human errors whilst taking the booking.

Some of the problems that has been occurring and majorities of restaurant are commonly facing are such as, restaurants staffs not being able to manage and fit in walk in's (Non-reserved) customers in busy peak times. Whereas in the off-peak times the restaurants tends to become very quiet.

Online Reservation

Online reservation is another existing platform for restaurant to offer their customers to make the table bookings. Since the online reservation started, it has gained many benefits for both restaurants and customers. Some of the benefits gained by using online reservation for restaurant are as follows:

- Improve on service quality.
- Could avoid mistakes such as e.g. double bookings or any other human errors.
- Could improve on volume and revenue of the business by marketing and targeting more customers.

Additionally, '**Elly Earls, The Caterer (2017)**' illustrates with the research showing that the 64% of restaurant searches result in reservation made through online are being made within an hour meaning that the users are reserving tables on the go. This makes a reservation through an app a very convenient way to book a table if you are outside.

History of online table Reservation

The History of online reservation starts from the late 90s, and throughout the years it has been growing rapidly in varieties of platforms such as website reservation, mobile app reservation etc. According to the '**Kimes, S.E. (2009)**.' The idea of online

reservation started from one of the largest online restaurant reservation provider called OpenTable.com. Later throughout the years the idea became very effective to restaurants which led to a massive increase of 1 million of customers just under 3 years, leading it to exceed more than 70 million customers by 2008. OpenTable now seats 3 million diners per month. At present time OpenTable is now known as the World's leading online restaurant reservation provider, seating 23 million diners per month across more than 43000 restaurants over the world.

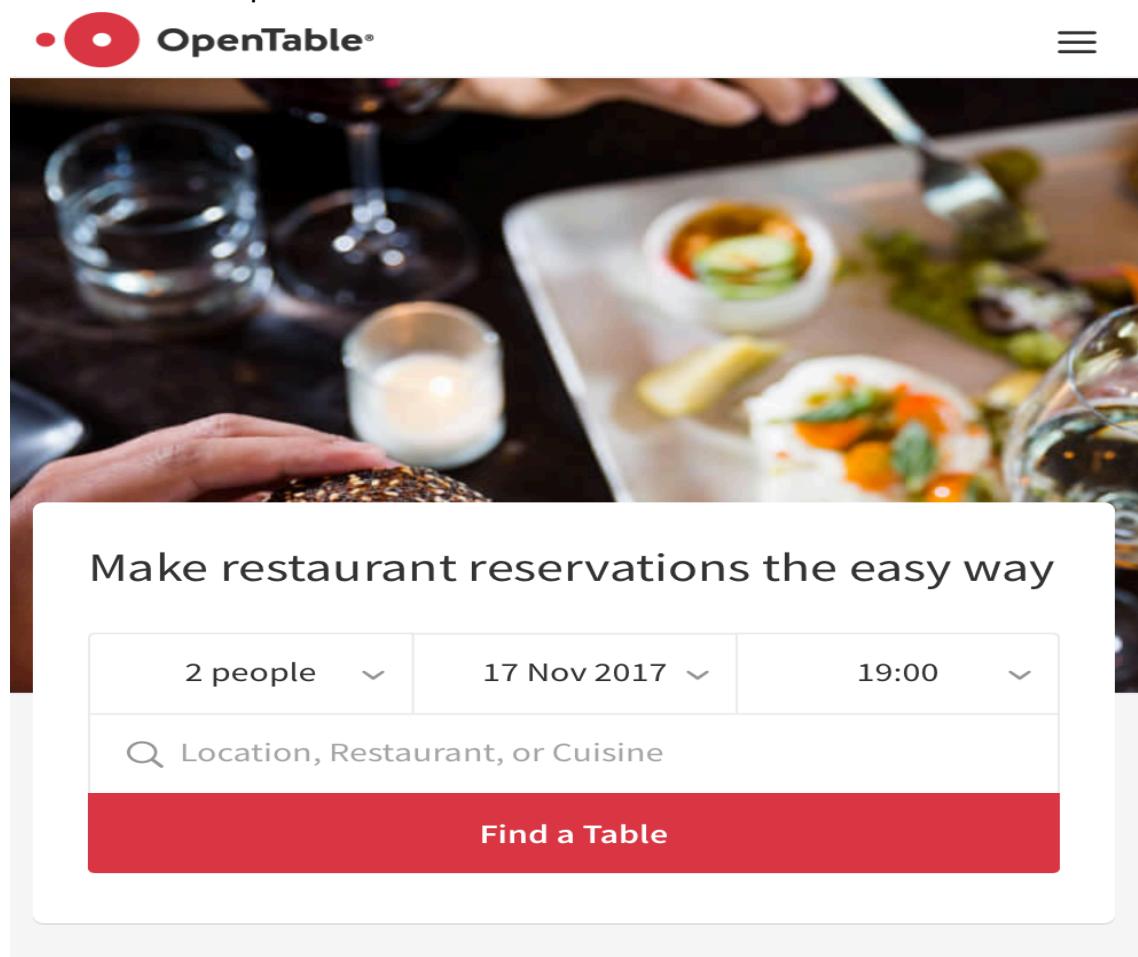


Figure 1 Screenshot of OpenTable application

Similar applications

There are many different applications which allows users to book the restaurant just by tapping on the phone screen, and then the users are allocated in a random table. However, there aren't many application which gives users an opportunity to look at the table image and pick the table before going ahead with their booking, which makes this app unique than others.

As I am expecting my app to display the inside layout of the restaurant tables so that the users could choose a table of their choice depending on where they prefer to seat, I surveyed similar applications that are out there which contains similar type of features.

After surveying some other similar applications, first similar application that I came across with was cineworld app which also uses similar feature such as letting the users choose the seats they prefer.

EXAMPLE 1. CINEWORLD

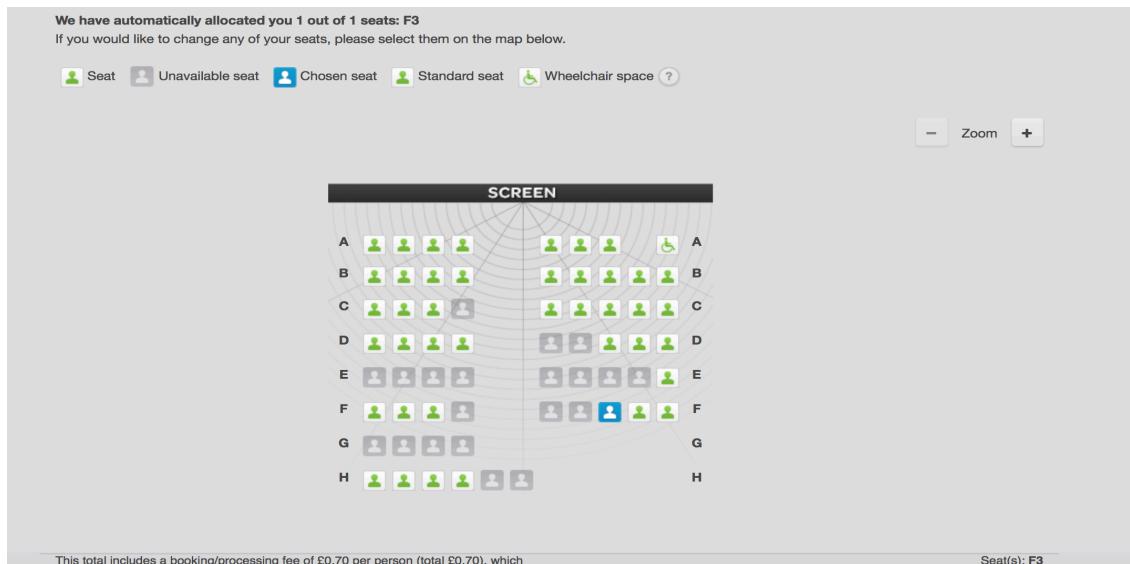


Figure 2 screenshot of reserving the seat for cinema.

As we can see on Figure 1, it illustrates the seats planning of movie screen for cineworld. Once the user chooses number of seats they want to book, the system automatically allocates the seat as a ‘chosen seat’ and it highlights the seats as blue, available seats as green and unavailable seats as grey, so that other users can’t book the same seat which has already been booked. Even though the feature seems to be very basic in terms of graphic wise, I think it will satisfy enough the users knowing that they have reserved the seat they wanted.

For my restaurant app, I will be using features which will be very much alike the cineworld app. However, I will consider on making sure that the features are more appealing to the users. I will be make sure that once user touches the table on their devices, a small icon should display on the screen showing the picture of the table that user chose.

EXAMPLE 2. RESDIARY

Secondly, another application that I came across which is fairly like the application that I will be developing which is ResDiary. ResDiary offers online reservation portal, www.resdiary.com and they also provide application which can be installed on your devices. ResDiary is a very convenient app for users, which lets diners instantly book nearby restaurants on the go.

The idea of instantly reserving the restaurant depending on their location is a very efficient idea, as it will give the users an option for different types of cuisines.



Figure 3 Screenshot of ResDiary application.

EXAMPLE 3- Stadium Seats Booking system.

Lastly, another example that inspired me to come up with such unique idea of 'table seating layouts' for restaurant reservation is from booking a ticket for a football match. I personally had to go through the procedures of purchasing the tickets, and I came across with screen of whole stadium seats layout. The idea of seats layout made me consider putting the similar feature on to my application for reserving a table. The reason I considered and went ahead with the idea is because I believe that it can have a lot of effects towards the users as it will allow them to look at

the inside view of the restaurant before deciding on whether they want to reserve the table.



Figure 4 Screenshot of Old Trafford Stadium Seating layout plan from Manchester United official webpage.

Choice of Hardware and Software

Software interface

The application will only run on the android operating system, specially on the version 4.4 KitKat. The reason I chose android studio as my IDE is because I think android studio is one of the most effective software for developing any sort of android applications. As android been an open source platform for everyone and as per now a day's androids operating system are been widely recognised across the world since they are used in most of the platforms and devices such as mobile phones, tablet, TV and computers etc.

Location and Map service

Google maps is another external API which I am considering to include on my app. Using Google maps API, it will allow the application to locate the nearest restaurants based on the google map data.

Hardware

Minimum Hardware requirement for android studio:

- SSD
- 8 GB of RAM
- Core i5

Choice of Programming Language

Android DEVICE MAY BE programmed IN languages such as Java, C#, Kotlin etc.

Java being the most popular and first option to develop android apps, it is also an official programming language for android development.

Throughout my previous experience with java taught me that Java has most of the support for games and apps on play store and it is supported from Google. Java was officially released back in 1995, and has become popular meaning that it is now used for wide range of programming languages.

Firebase

To store the user's data's and other information, the back- end system that I would be using will be firebase, which is very smoother and faster for debugging and rolling out increase level in the application. Firebase uses the real-time database where data is mostly stored as JSON and it synchronizes continuously with each associated client. As my application will be built through firebase, there will be no need for me to make my own database or any sort of APIs, as it handles all the components with simply creating backend for app. There are many benefits with using firebase such as:

- Real Time Database provides real time application database, which will let the developer synchronize data and store it in the firebase cloud.
- App notification which will be desirable for letting the users know that they have some information to check.
- Supports authentication using email id and password.

Targeted Users

Android users

The application will be targeted for all type of users who owns an android phone. According to the 'Mike Conyers, founder for online reservation system provider of ResDiary' says that over 60% of UK adults now own mobile phones and more than 95 % of users use their smartphones to reserve their restaurant.

Restaurant Owners

As the application will be a third-party service which will be provided for the restaurant, the main targeted user for the application will be restaurant owners, as they will have to make an agreement on whether they would want their restaurant to be shown on the application.

Conclusion

Lastly overall to summaries my review, after surveying similar applications and looking at the issues with current applications, I think developing my app will be beneficial for both restaurant and the customers. The core objective of the application is to make the way of reserving a table lot easier for the restaurant customers. At the end of the day not all the customers are happy with where they are seated at the restaurant, some prefer somewhere quite in the corner or some prefer where the environment is lively and crowded. I think this application will really fulfill to choose the customers desired tables, as it will allow the them to pick the table, look at the picture of the table and then reserve it.

I think this procedure will also allow the restaurant to manage their bookings quite successfully, as the system will automatically arrange the bookings so there will be no issues with double bookings or any other errors which are normally caused by staffs if they took the reservation through telephone. Another benefit for the restaurant with the application is that they won't have to set up a table planner manually every time for each booking made through other platforms like website booking or phone call. Since you can input those bookings in the app which would then update the user's app saying that the table is unavailable.

Bibliography

[image]. (Figure 1)
<https://booking.cineworld.co.uk/booking/8016/115458/7660d070ca2011e7952eed24edc1aab0/seats>. (2017).

(Figure 2)
(2017). [image] Available at: <https://www.opentable.com/start/home> [Accessed 17 Nov. 2017].

(Image).(Figure 3)
<https://www.resdiary.com/Search?searchText=Leicester,%20United%20Kingdom&latitude=52.6368778&longitude=-1.1397592&page=1&searchDistance=10&visitDate=2017-11-17&visitTime=18:00&covers=4>. (2017).

(Figure 4) Seating plan. (2017). [image] Available at: <http://www.manutd.com/en/Tickets-And-Hospitality/Seating-Plan.aspx> [Accessed 17 Nov. 2017].

Kimes, S. E. (2009). How restaurant customers view online reservations [Electronic article]. Cornell Hospitality Report, 9(5), 6-15.

Strachan, D. (2017). The best restaurant booking apps. [online] The Telegraph. Available at: <http://www.telegraph.co.uk/travel/advice/The-best-restaurant-booking-apps/> [Accessed 17 Nov. 2017].

Elly Earls, (2017) ‘The power of Restaurant reservation systems’ online article.
Available from:<https://www.thecaterer.com/articles/494589/the-power-of-restaurant-reservation-systems>.
[25th January 2017]

Reservations, R. (2017). Restaurant Reservation Systems. [online] WebstaurantStore. Available at: <https://www.webstaurantstore.com/article/123/restaurant-reservations-system.html> [Accessed 17 Nov. 2017].

Scholarship.sha.cornell.edu. (2017). [online] Available at:
<http://scholarship.sha.cornell.edu/cgi/viewcontent.cgi?article=1828&context=articles>
[Accessed 17 Nov. 2017].

Net, H. (2017). Restaurant Reservations - Technology v Human: More than just a reservationist | By Paul Sarlas – Hospitality Net. [online] Hospitality Net. Available at: <https://www.hospitalitynet.org/opinion/4082619.html> [Accessed 10 May 2017].

Functional Requirements Specifications.

User app Functional requirements.

Req.ID	Requirements Description
FR.01	The app must allow user to show all the restaurants nearby their location .
FR.02	The app must allow user to choose their favourite cuisine type.
FR.04	The app must allow user to choose a time for when they want to book a table.
FR.05	The app must allow user to give an option to choose how many people they would want to book table for.
FR.06	The app must allow user to display availability of the tables inside the restaurant.
FR.07	The app must allow user to pick the table of their choice and reserve it, only if they are available.
	The app must allow users to enter any comments they have regarding the booking, in the ‘comment box’.
FR.08	The app must display the contact details and other information e.g. address; of the restaurant if the users wish to contact the restaurant directly.
FR.08	The app must allow users to enter their name, email and their phone number if the restaurant needed to contact them.
FR.09	The app must automatically send user a text and an email to saying that the booking has been booked.

Admin App Functional requirements

Req.ID	Requirements Description
FR.10	The App must allow admins to log in and log out of their accounts.
FR.11	The app must allow admin to check the bookings made by the users.
FR.12	The app must allow admin to show the users email and phone number.
FR.13	The app must allow admin to edit and updates the tables.
FR.14	The app must allow admin to whether accept the reservation or cancel it.
FR.15	The app must allow admin to input the bookings manually. (bookings which aren't made through the app).

The user app will use firebase and have 7 screens.

Home Screen	<ul style="list-style-type: none"> • Displays App Logo • Asks user for permission to use their location • Allows users to enter their postcode • Offers user to retry if the postcode is invalid or unrecognizable by the app.
Lists of Restaurants screen	<ul style="list-style-type: none"> • Displays options of different cuisine types of restaurants e.g. Indian, Chinese, Italian etc. • Allows user to select the cuisine type they want to book a table for. • Displays all lists of restaurants nearby the location chosen by users. • Allows users to select the restaurant and automatically takes the user to Reservation times page. • Back button to go back and change the location if the user wishes to do so.
Available Reservation times/date e/number of peoples Screen	<ul style="list-style-type: none"> • Allows user to enter for how many people the booking is for. • Displays the availability times for that amount of bookings. • Allows users to select the time and date that they wish to reserve for. • Back button to go back if they wish to change the restaurant.
Restaurant Tables Available Screen	<ul style="list-style-type: none"> • Displays the table plans inside of the restaurant • Displays green and red for each table; green for available to reserve and 'red' for table already reserved. • wouldn't allow the users to select the tables that has been already reserved. • Would allow the users to select the available tables. • Offers the option which will notify the users if the table gets cancelled.
Reservation Confirm screen	<ul style="list-style-type: none"> • Displays the summary of the booking before clicking confirm button. • Option to clear the reservation and start a new one. • Confirm button to confirm the existing booking. • Allow users to enter their Phone number and email address for booking confirmation.
Help section	<ul style="list-style-type: none"> • Should display contact information's of technical support team, if the users have any technical issues with app that they want to solve.
Firebase	<ul style="list-style-type: none"> • Maintains Real-time Database. • Makes connection within the Restaurant app and Users app. • Updates the Tables availability after the reservation has been made or cancelled. • Uses notifications to alert users. • Uses cloud messaging to send emails for confirmation of bookings.

The Admin app will use firebase and have 3 screens.

Home Screen	<ul style="list-style-type: none">• Displays App Logo• Allows admins to enter username and password.• Offers retry if the username or password is incorrect.• Offers 'Forgot my password' service if the admins forget their password.
Your restaurant screen.	<ul style="list-style-type: none">• Displays the tables that has been reserved as Green.• Displays the tables that aren't reserved as Red.• Allow admins to go to previous and future bookings dates.• Allows admins to touch the reserved tables and see if any comments are left from the customers• Allow admins to manage and move tables around interactively.• Automatically updates with notification if the tables are reserved or cancelled.
Admin Account settings screen	<ul style="list-style-type: none">• Allows admins to change, update their account details.• Allows admins to log out of their account.
Firebase	<ul style="list-style-type: none">• Uses real-time database.• Makes connection within the Restaurant app and Users app.• Updates the Tables availability after the reservation has been made or cancelled.• Uses notifications to alert Admins.• Allows admins to send a confirmation email/text messages.• Uses cloud messaging to send emails for confirmation of bookings.

Appendix

Project contract

IMAT3451 Project Contract– Development Projects

Student Name-Mohit Gautam
P-number-P15194912
Programme-Computer science
Email address- p15194912@my365.dmu.ac.uk

Project Title – Restaurant Table Reservation Android App.(Table4Me)

Project Proposer

Mr Mohit Gautam, DMU Computer Science Student. P15194912

Supervisor

Dr Richard Bates, Lecturer, School of Computing, Richard.Bates@dmu.ac.uk

Introduction

The project I am going to develop will be an android restaurant reservation booking app. In this contract, I will talk about all the features that I will include on my app and I will also talk about what the aims/deliverables of my app will be. I will also talk about the risk that I could be facing throughout the project and ensure how I could prevent these problems if they occur.

Project Background

My app idea comes from my interest towards developing new things and I always was a very interested person in programming. The interest also came from my family run business restaurant, where sometimes the restaurant had difficulties to manage tables and allocate the bookings in certain times for the customers. Because of finding it hard to manage bookings on a busy night due to people just ringing up and saying, “Could I book a table please?” and the staffs their just tend to say “yes” to all the bookings which caused many double booking and other problems.

So, I think developing this app would not just help my family run restaurant, in fact it could help all the other restaurants that are out there who are finding it hard to manage the tables for their customers.

The reason I am captivated about android is because a large portion of the hands-on innovation working frameworks are android based, and I figure it will be an awesome open door for me in future also on the off chance that I figure out how to create android application.

Aims:

The aim of the project is that it will develop a restaurant table booking app for android devices. The app will be beneficial for both users (restaurant owner and the app user) this is because the app will allow users to choose the table they prefer so they can sit at their choice of the table, and on the other hand the restaurant owner won't have to manage the tables or worry about having a double booking as the app will do it itself automatically and only show the available tables. For this procedure to work, I will also have to develop another app which

will be used from restaurant, and through that application they can manage/update basic information by themselves such as changing the tables layout or updating pictures etc.

To achieve the aims and get app to successfully work I will need to know java code which I had experienced with during previous years in my university. However, to expand my knowledge more I will have to look on to a lot of resources that are out there which would aid me with to complete the project.

Objectives:

There are several objectives that needs be completed for this project to be successfully developed. The list of objectives are provided below:

- 1) To finalise my project and sign-off a project contract, ethical review, BCS check-list and Ethical check-list for my project by week 4.
- 2) To conduct a literature, review the current restaurant booking systems techniques, and to examine and summarise the current application and checking how were they developed and what software were used, investigate the ways to connect the application to the users and the restaurant owners. Every research and source of information will be referenced using a Harvard style referencing.
- 3) To produce a list of hardware and software requirements for the development of my project.
- 4) To produce a first submission report by end of week 7 that includes the contract, literature review, and requirements specification.
- 5) To design my project software using class diagrams, entity relationship diagrams, storyboards and interface designs and other appropriate tools.
- 6) To find a way of which will link between the customer apps and the restaurant control app, connecting the many customer apps to the single restaurant app.
- 7) To test my software and identify problems, document those problems, and attempt to solve those problems.
- 8) To produce a final report and critical evaluation of my work, with appendices detailing code and design highlights. In this report, I will talk about the main purpose of the project and the functions it performs. The report will contain its introduction, body and conclusion.

Deliverables:

First Report

Week 7

The Deliverable will contain:

- **Project contract**
Project contract will contain all the information about how I am going to develop the project, what will I include in the project and how will I complete it.
- **Ethics form**
Ethical form will contain whether if there will be any ethical issues while developing my application.
- **Project Plan (e.g., Gantt Chart)**
Project plan will contain my actual plan for the project itself. I will complete this plan by creating a Gantt chart.
- **Global Check-list**
To check whether if my project would have global impact, I will have to ensure whether if my project will be specifically targeted for only one restaurant or many? Will it have any impact on different religion, culture etc.?
- **Literature Review** which will examine and review my app. In this review, I will talk about the similar application that are out there and I will compare how my app could be different from the existing applications.

- Requirements Specification detailing the features that my app will have, and how it will function.

Final Report

Week 29

My Final deliverable report will contain the following subjects.

- Will include Case Diagrams/Descriptions/ER model/State transition diagrams of my app.
- Story boards/Interface Designs and life-cycle of the project
- Design Documentation
- Test Plan and test results, verification and validation of the work, using screenshots and commenting on the codes.
- Prototype of the application.
- Final report, including critical evaluation.
- Software, as in my case the software will be android studio.

Viva examination

Weeks 30-32

- Oral examination, PowerPoint and demo of my app, which will take place during end of term. This examination will be formal and I will have to demonstrate my application in front of my supervisor and 2nd marker who will be there to assess my project.

Resources and Constraints

For the application that I will be developing, I will require an access to an android developer studio installed on my laptop. I would also need at least two android devices.

I would also need to know information about the restaurant on how the owner wants the app to be. I would need access to the all the inside view of the restaurant and pictures of each tables to ensure that restaurant could choose the table that they like.

Sources of Information

To complete this application, I will be using a lot of sources of information. First I will have to talk to the restaurant owners and gather some basic information about the restaurant such as e.g. opening times and closing times etc.

Furthermore, to find out about different views and perspective of people towards the application that I will be developing, I will conduct a survey where it would be an anonymous, and I will use this survey as a source of useful information to talk about whether other restaurant will think if the app would be effective or not for their business.

To gain my knowledge for developing android I will be looking at tutorials videos on YouTube on how to develop the application.

Risk Analysis

During the process to develop the app, there might be some risk which needs to be analysed before starting my project. The risk that I could be facing throughout my project can be such things as:

- Loss of work
- Not attending the meetings
- Not following up the plan (Gantt chart)
- Personal issues/illness

However, to prevent these from happening I will have to take an action towards those risks and make sure they don't happen. To do this I will make sure I will have an alternative backup plan to get the work back. To prevent any loss, I will use GitHub to store and organise my project files.

I will also try my best to attend all the meetings assigned by my supervisor. If somehow, I am unable to turn up to the meeting, I will rearrange another suitable time for a meeting with my supervisor.

Another issue as I have mentioned above on the list is one of the main issue that could occur several times throughout developing my app, which is not following up with the plan. This issue could prevent my project from completing it, within the deadline period time. So, for me to prevent from this issue, I will monitor my progress and take notes and ensure that I hit my planned targets on time, I will also have to make sure that I am confident on what I'm doing, asking for help with supervisor if I'm faced with my any sort of problem with my report. And I will also ensure that I keep good time management during development of my project.



Student

Date-27/10/17



Proposer

Date27/10/17



Supervisor

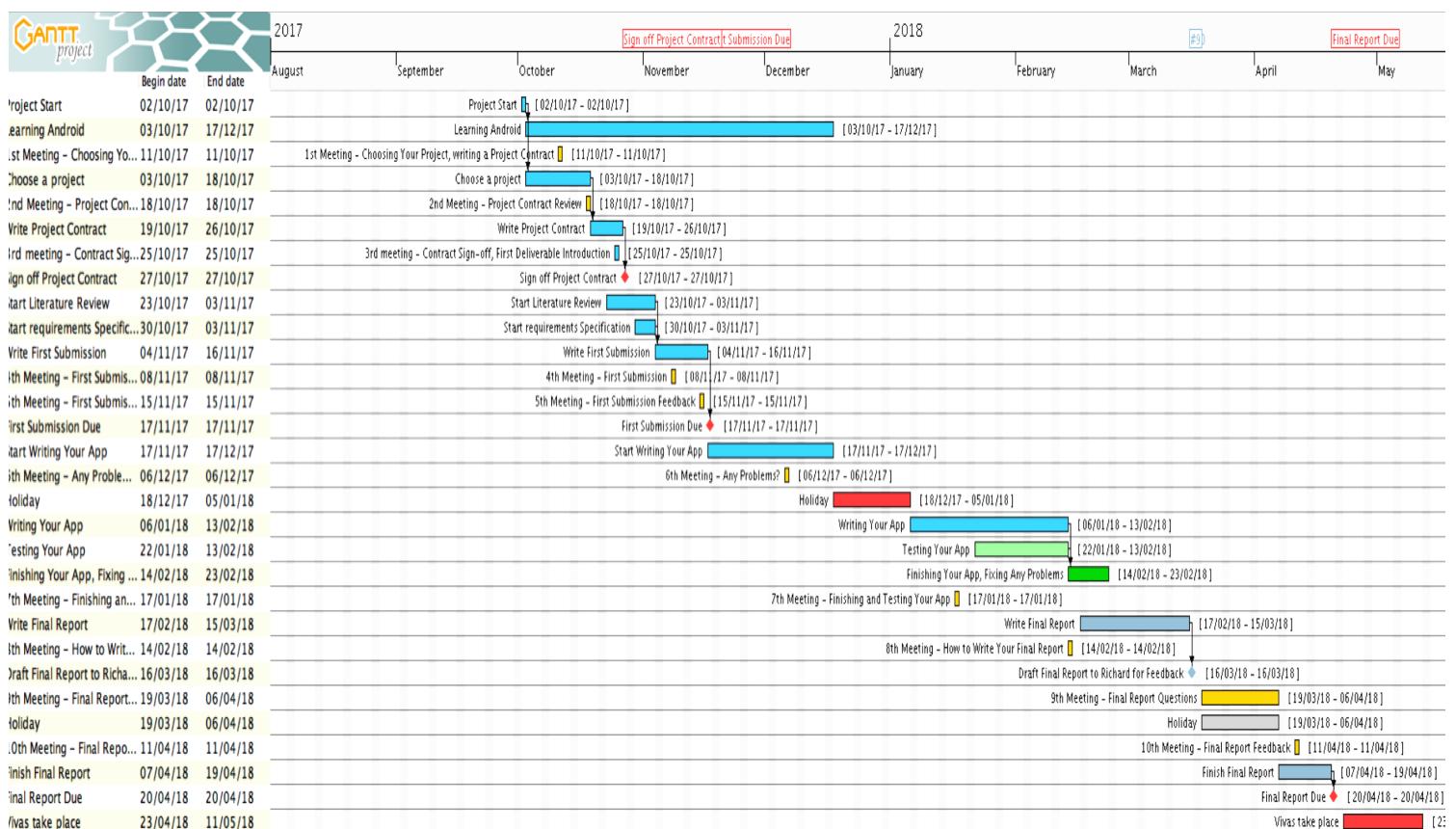
Date 27/10/17

Project Plan-Gantt Chart.

Schedule of Activities

Finally, to track on where I am with the project and to set a plan on day to day basic I will need to have an effective plan to ensure that I complete all my project works on the set deadlines.

To set my plan, I have created a Gantt chart using a Gantt project software. the Gantt chart will contain all my scheduled planned work with set date and end date for each task.




Student

Date-27/10/17


Proposer

Date27/10/17


Supervisor

Date 27/10/17

Ethical Review Form

IMAT3451 FINAL YEAR PROJECT - ETHICAL REVIEW FORM

The University requires all undergraduate final year projects to undergo an ethical review and, where human research ethical issues are identified, to ensure that these issues are addressed.

For the majority of Computing Final Year Projects, the outcome will be either 'No ethical issues' or 'Minor/Major ethical issues which have been addressed'; in these cases approval can be given by the supervisor. In the unlikely event that the outcome is 'Ethical issues that have not been addressed', the completed form will need to be forwarded to the Faculty Research Ethics Committee.

Student Name

Mohit Gautam P15194912

Programme

Computer Science

Project Title

Restaurant table reservation android app. (Table4Me)

Brief description of proposed activity and its objectives:

The project will develop an android application, which would be mainly targeted for restaurants. The app will aid the restaurant allowing them to make their table booking system easier. It will also aid the app users which will allow them to choose the table of their choice, without having to call up the restaurant. I will create this application through android developer studio and I will have to find some sort of way to create customer database, which my supervisor will recommend it to me.

Ethical Issues Identified:

There will be very minor ethical issues which could be addressed. Some of the issues are like where, I must deal with real life people whilst conducting a survey, which many people may feel like not giving out their personal information/data.

Another ethical issue that I have identified is using pictures of the restaurant which could lead to problem such as copyrights issues.

How these will be addressed:

However, there are some solution which can be used to address the issues. The survey will be completely anonymous, the purpose of the survey is only to find out people opinions about my project, and whether if they think it will have any affect in business perspective way.

As my project will need images and table plans, I will use generic restaurant plan which I will make up myself. I will also not use any types of personal data exchange which could lead to my project having with ethical issues. And all the users will be generic text users and there won't be any sort of personal data used.

Checklist

Has the project proposal identified any of the following research procedures?

1. Gathering information about human beings through: Interviewing, Surveying, Questionnaires, Observation of human behaviour
Yes / No
2. Using archived data in which individuals are identifiable
Yes / No
3. Researching into illegal activities, activities at the margins of the law or activities that have a risk of personal injury
Yes / No
4. Supporting innovation that might impact on human behaviour
e.g. Behavioural Studies
Yes / No

If 'Yes' to any of 1-4 above: have you considered the following?

- Providing participants with full details of the objectives of the research
- Providing information appropriate for those whose first language is not English
- Voluntary participation with informed consent
- Written description of involvement
- Freedom to withdraw
- Keeping appropriate records
- Signed acknowledgement and understanding by participants
- Consideration of relevant codes of conduct/guidelines

Ethical Review Outcome

- 1. No ethical issues
- 2. Minor ethical issues which have been addressed and concerns resolved
 - 3. Major ethical issues which have been addressed and concerns resolved
 - 4. Ethical issues that have not been resolved/addressed

Authorisation

If the outcome is no. 3 or 4 above, this form should be forwarded to the Faculty Research Ethics Committee.

Signature of student



Date-27/10/17

Signature of supervisor



Date -27/10/17

Global Checklist

IMAT3451 FINAL YEAR PROJECT - Global Checklist

The University requires all undergraduate final year projects students to undertake a global review of their project. Here is an International Impact Checklist for you to complete, which can be done in consultation with the project supervisor.

Student Name

Mohit Gautam
P15194912

Programme

Computer science

Project Title

Restaurant table reservation android app. (Table4Me)

Please indicate which of these possible attributes is addressed by your undertaking of this project.

Possible Global Experience	Addressed by Project
Ability to work collaboratively: teams from a range of backgrounds and countries	x
Excellent communication skills with a sensitivity to speaking with and listening to non-native English speakers	
An ability to embrace multiple perspectives and challenge thinking in a range of cultural context	
A capacity to develop new skills and behaviours according to role requirements	x
An ability to negotiate and influence clients across the globe from different cultures	

An ability to form professional, global networks	X
An openness to/respect of a range of perspectives from around the world	x
Multi-cultural learning agility (i.e. able to learn in any culture or environment)	X

As my application will be a restaurant booking system app, meaning that any different ethnicity restaurant such as Indian, Italian, Mexican, English etc. will be included in the app, as it will be an open platform and will not have any restrictions to anyone.

I will ensure that my app will be available and will work in different countries and cultures without having any bias. I will also ensure that my application will be very user friendly and will contain a 'help page' so any body could use it effectively without having to occur with any problems.

However, If there is to be any sort of problem, I will develop an alternative way where users will contact me directly if they have any issues or with my app and where I will be able to take an immediate action.

Signature of student:



Signature of supervisor:



Date 27/10/17

BCS accreditation checklists

IMAT3451 BCS Accreditation Checklist

Student Name -Mohit Gautam

P-number-P15194912

Programme-Computer Science

Email - p15194912@my365.dmu.ac.uk

Project Title Restaurant Table Reservation Android App.(Table4Me)

Project Proposer

Mr Mohit Gautam, DMU, Computer science third year student.

Supervisor

Dr Richard Bates, Lecturer, School of Computing, Richard.Bates@dmu.ac.uk

BCS Accreditation

Your supervisor needs to check your contract against this list and sign if you are on a BCS accredited course. Take note of this and be sure that you mention all requirements.

This contract contains an elucidation of the problem, the objectives of the project and a risk analysis	Yes <input checked="" type="checkbox"/>	No
The contract states that the project will include an in-depth investigation of the context and literature, and where appropriate, other similar products	Yes <input checked="" type="checkbox"/>	No
The contract states that the final report will contain a clear description of the stages of the life cycle undertaken	Yes <input checked="" type="checkbox"/>	No
The contract states that the final report will contain a description of how verification and validation were applied.	Yes <input checked="" type="checkbox"/>	No
The contract states that the report will contain a description of the use of tools to support the development process	Yes <input checked="" type="checkbox"/>	No
The contract states that the final report will contain a critical appraisal of the project, indicating the rationale for any design/implementation decisions, lessons learnt during the course of the project, and evaluation (with hindsight) of the project outcome and the process of its production (including a review of the plan and any deviations from it)	Yes <input checked="" type="checkbox"/>	No
The contract states that there will be a description of any research hypothesis	Yes <input checked="" type="checkbox"/>	No
The contract states that all research will be fully referenced	Yes <input checked="" type="checkbox"/>	No
Contract is suitable for BCS Accredited Project	Yes <input checked="" type="checkbox"/>	No
	Supervisor Signature	

Mohit Gautam
P15194912



Student

A handwritten signature in black ink, appearing to read "Mohit Gautam".

Date 27/10/17

Proposer

A handwritten signature in black ink, appearing to read "Proposer".

Date 27/10/17

Supervisor

A handwritten signature in black ink, appearing to read "Supervisor".

Date 27/10/17

Periodic progress reports

IMAT3451 Final Year Project Periodic Progress Report

Programme/Course Title: G40051 Computer Science BSc(Hons)

Name: *Mohit Gautam*

Assessment Period: *2/10/17-11/10/17*

Project Title: *Not decided yet* Report Number: *1*

Objectives for Period: (refer to previous report)

Some of the objectives for this period are:

- To meet with my supervisor.
- To finalize my project subject.
- To start learning android and asking supervisor on what would be the best software to use.
- To look at the overview summary of the project itself and what will I be doing through out the process of developing the app.
- To start filling my project contract, ethical review, progress plan and other forms.
- To learn to create a Gantt chart using Gantt chart software.

Summary of Progress for Period: (identify evidence of progress)

- Before the meeting with my supervisor, I had installed android Studio on my laptop just to get familiarise with it.
- During the period I had first meeting with my supervisor.
- I had researched for different ideas of project before going to the meeting, and during the meeting my supervisor helped understand and elaborate more for the project that I had on my mind by giving me more ideas that I could be using within my project.
- I have also started drawing drafts on piece of paper to get rough idea of the project and how it is going to work and look.
- I also started filling project contract and all the other checklists.
- With the help from my supervisor I have also learned how to create my own Gantt chart using the Gantt chart software.

Problem Areas and Suggested Solutions:

- I couldn't attend my first group project meeting due to an appointment I had, however I managed to meet up with my supervisor on other day.
 - I had difficulty deciding on what application I will be developing, however after the meeting my supervisor gave me loads of ideas which helped me to decide on the application that I want to do.
-

Objectives, Deliverables & Plan for Next Period:

- To attend one to one meeting with my supervisor.
- To continue learning android studio and finalise with my project .
- To finish of writing my project contract and sign it off.
- To finish my Gantt chart with more support from my supervisor.
- Start thinking to write the literature review and requirements.

Date of Next Review: *18/10/17*

IMAT3451 Final Year Project Periodic Progress Report

Programme/Course Title: G40051 Computer Science BSc(Hons)

Name: Mohit Gautam

Assessment Period:

Project Title: Table4Me app

Report Number: 11/10/17-18/10/17

Objectives for Period: (refer to previous report)

Some of the objectives for this period are:

- To have second one to one meeting with my supervisor.
- To ask for help if needed to complete my project contract/ethical/global/BSc forms.
- To think of a App name.
- To Finish off Gantt chart using one of the Gantt chart software.

Summary of Progress for Period: (identify evidence of progress)

- During the meeting with my supervisor, I shared some ideas of what my apps name will be, and he recommended me with some really good names and I finalised with the name 'Table4Me'.
- During the period I have start learning basic features of android studio and I managed to create a simple app which outputs 'Hello world'.
- I finished my Gantt chart using the Gantt chart software.

Problem Areas and Suggested Solutions:

- I had issue with my Gantt chart software as I was struggling to use the software, however my supervisor who was familiar with the software helped me to solve this issue .
- I was late for my one to one meeting as my train was delayed, so I had less time to talk to my supervisor for my progress over the project, however to overcome this problem, I emailed my supervisor who explained the topics which I was unable to cover in short amount of time.

Objectives, Deliverables & Plan for Next Period:

- to attend second group meeting with my supervisor.
- to complete all of the four forms and send it to my supervisor for a feedback.
- to start looking at the literature review and requirements, as it will be due soon.
- to send off all of the four signed forms.

Mohit Gautam
P15194912

