A Project Report

On

"Luscious - Taste the flavor of catering"

Submitted by

Team id: 99971

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Guided by

Prof. P.A.Bhura

In partial fulfilment for the award of the degree

Of

BACHELOR OF ENGINEERING

In

"Computer Engineering"

GOVERNMENT ENGINEERING COLLEGE, MODASA

Gujarat Technological University, Ahmedabad

Year: 2020-2021

GOVERNMENT ENGINEERING COLLEGE MODASA

Department of Computer Engineering/Information Technology

CERTIFICATE

Date: 15/10/2020

This is to certify that the project entitled **"Luscious - Taste the flavor of catering"** has been out by **"Bhrvi P. Suthar"** having enrollment no. "**180163107034**" under my guidance in fulfilment of the Degree of Bachelor of Engineering in **"Computer Engineering"** 8th Semester from Gujarat Technological University during the academic year 2020-2021 and submitted on 15/10/2020.

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Abstract

Luscious is a PHP Framework (CodeIgniter) base Portal which will provide Facility of Online Catering System and also user can book the caterer for their events.

The Luscious has four type of login including Admin, User, Caterer, Advertiser.

Admin will be able to manage order, manage dishes, manage Slider, manage Testimonial, manage Staff, manage Caterer, manage Advertiser, view Feedback, etc...

The user will be able to book an order, manage profile, give feedback regarding order, etc...

The Caterer will be able to manage incoming order, view orders, manage profile, etc...

The advertiser will be able to manage the advertisement, manage profile, etc...

Luscious is a portal which is very useful for the User as it is very easy to access. User have no longer to wait for their order. They can quickly book a Caterer for their Event by using this web portal

Table of Contents

Table of Figures

1. Introduction

1.1 Project Summary

In Today's world, everything is running online. The Internet has taken a wide area over a human being. Nowadays you don't have to waste your single time because everything is available online. Such as that we have to make a web portal about catering system named "Luscious: - Taste the flavor of catering". It is a web portal in which you can book your Caterer for your event. Using "Luscious" you can get your available budget and also you can save you time too.

1.2 Project Goal and Objectives

The basic goal is to book the Caterer of your choice nearby area of your house. And also, you can book the Caterer from anywhere at any place using this web portal by sitting at home.
And if you have any query about any regarding this portal our team are ready to help you out off.

Objectives:

- Time saving and cost effective.
- Easy to Use.
- Instant booking Available.
- Online booking.
- Secured with verified users.
- Fast Services Available.
- Instant check support.
- Easy to Contact

1.2 Scope

Scope of this application "Luscious - taste the flavor of catering" is going to help you out by instant booking the Caterer for your event at your home from nearby place of you home.

2. Requirement Study or Literature Review

2.1 Technology and Literature Review

- Platform Specification: Web browser
- MS OFFICE: -2019
- Code Behind: PHP
- Development Tool: PHPMYADMIN,GitHub
- Front-End Tool: HTML, PHP.
- Back-End Tool: PHP.

2.2 Project Planning

The first step of project planning by searching a keyword “Luscious” in the web site and come up with the different web site of Catering system and go through this all site and came up with the idea of making a web portal which provides a caterer to the user for their event. The user can book the caterer online without wasting their time in searching for them offline. this way we decided to make a web portal on booking the Caterer online and we name it " Luscious - taste the flavor of catering"

2.3 Risk Management

It is the process for understanding of project and be careful about the risk which occurs in projects. There are mainly three steps of risk management below this are:

2.3.1 Risk Identification

It is the first step for Risk Management Risk Identification is related to find risk in project. Dependency of the risk is the trained developer, Customer furnished item. In risk identification there some requirements issue also generates as Example: Lack of clear product vision, Lack of technical staff, not clear requirements, changing in requirements, etc. Also have some general risk like lack of resources, Time duration not proper management, customer requirements, lack of information.

2.3.2 Risk Analysis

When risk is analyzed, it is important to qualify the level of uncertainty and the degree of loss associated with each risk. To accomplish this, different categories of risk are considered.

Project Risk: It threatens the plan of the project. If the risk is generated then the cost of the project will increase very much. In the risk there are some factors like size and complexity of project, structure of project is affected to risk of project.

Technical Risk: It threatens the quality and timeliness of the software to be produced. If this risk is generated implementation of project become difficult or it become impossible.

Business Risk: It threatens the viability of the software to be built.

2.3.3 Risk Planning

It is means of addressing the concern for system availability by identifying potential exposure (burns out, disgruntled employee inflicts serious damage), prioritizing application and designing safeguards that minimize loss if a disaster occurs.

2.4 Estimation

2.4.1 Effort Estimation

The system which is generated are very useful for financial company who worked with the loan and insurance system. So, the system is very useful for customer and employee. The effort for this system is not much more because it is easily understandable by anyone but the much more time taken for generate because in the system all about the money so the minor mistake is become bigger in the system. There are many efforts done to make this system easy and very useful.

2.4.2 Cost Estimation

The cost of this system depends upon the caterer you book and the dishes of your order given to the caterer for your event.

2.5 System Requirement Study

2.5.1 User Characteristics

- User can book the order

- User can Track the order
- User can manage their own profile
- User Can delete their order

2.5.2 Hardware Requirements

- RAM: 4 GB and above
- Processor: Intel Pentium or latest
- Equipment Used: GPS, WIFI, another Network Tool
- Memory: 512 mb and above

2.5.3 Software Requirements

- PHPMYADMIN
- GitHub
- Database: Web Services
- Memory: 4GB RAM

2.5.4 Constraints

Regulatory Policies:

- The length of the project is 9 months so it is limited amount of time.
- The project developers are well trained and will take time to understand about the technology.
- It is easy to understand and reliable in work with the system.

Reliability Requirements:

- The system should be reliable enough so that the data found in the database system is consistent at any point.

The system should be able to handle loads of requests from different users around the world at the same time.

Criticality of the application:

- The system is based on web application and so fails if there is no Internet Connection. The system might not work if the Internet Connection slows down.

- The system stops working in case if the database server or the application server stops working.
- The system might give erroneous output if it fails to connect to the database server.
- This system will not work if there no GPS location accessibility.

3. Design: Analysis, Design Methodology and Implementation

3.1 Study of Current System

This Software Requirements Specification provides a complete description of all the functions and specifications of the Web application ““Luscious - Taste the flavor of catering””.

3.2 Problem & Weakness of Current System

a. This system is used for book the order only.
b. This system can be used if there is active internet connection otherwise this application will not work.

3.4 Feasibility Study

3.4.1 Operational Feasibility Studies

If new user arrives then he/she has to sign up to the application. Then afterward application will give option of book the Dish for function. If user wants to Advertisement in his function then it’s given some discount from this web application. If user wants to select dish for function than gives menu and prize for this item. User has also option of feedback. User update the profile and manage his profile.

3.4.2 Technical Feasibility Studies

This Web application is totally based on the internet connection. This Web application can be used any mobile devices and tablets. This application works on the internet so the working speed of this system is depending on the speed of the internet. All the data are store on the server database not on the user device so it is adjustable in small space of memory.

3.4.3 Economical Feasibility Studies

We developed this Web application to save the more expenses and user Friendly. Here is the most important part is human effort, but parallel of this thing is time effort. Time effort also effect on development of product.

3.5 Requirement Validation

System is Web application based and is used by many customers at a time so it is highly reliable and it is with minimum down time. Validation is the main reliability requirement that is used in the system. Without proper validation, system does not allow to enter the value in the database.

3.6 Function of System

3.6.1 Use Case Diagram

In software and systems engineering, a use case is a list of actions or event steps typically defining the interactions between a role (known in the Unified Modeling Language as an actor) and a system to achieve a goal. The actor can be a human or other external system.

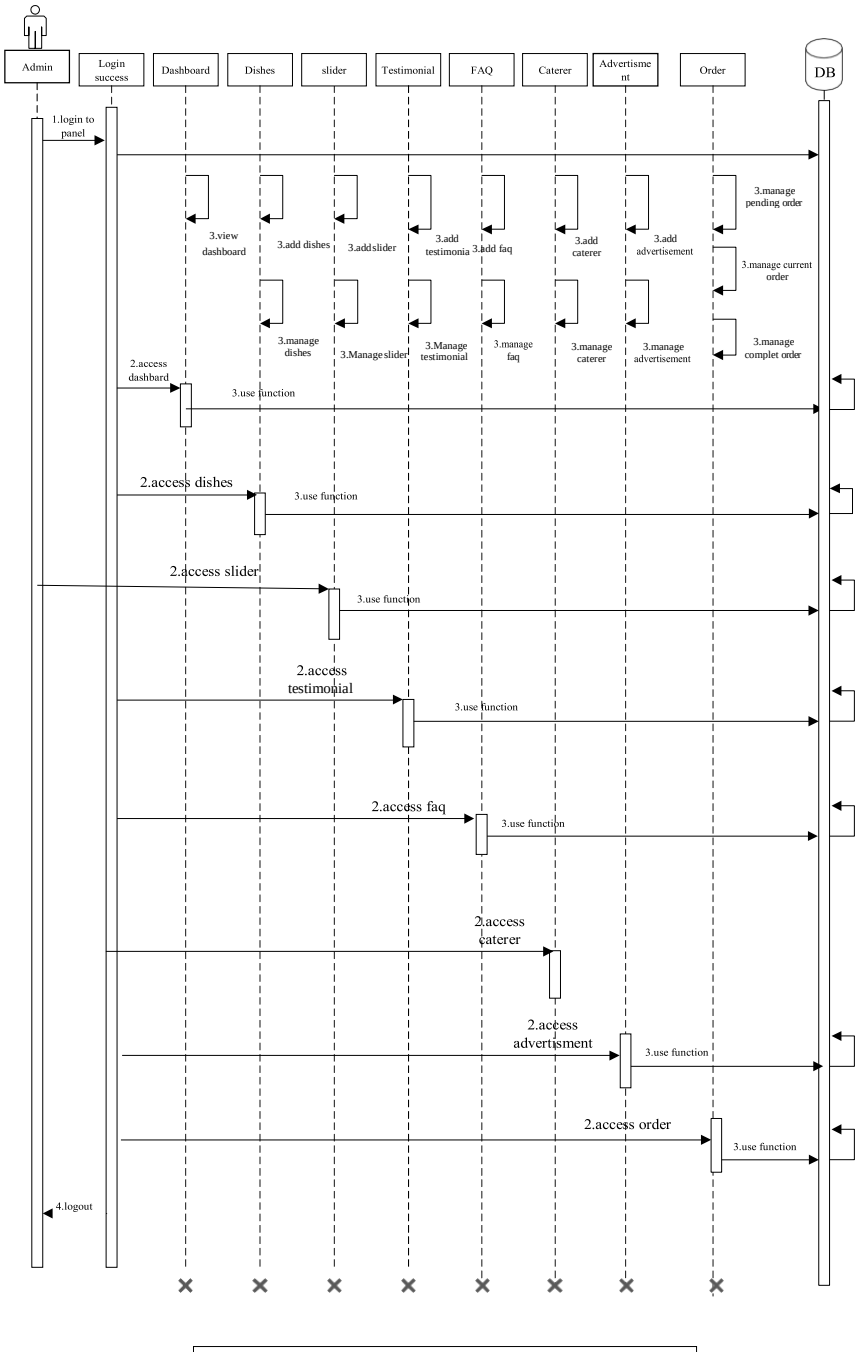
In this use case diagram roles of different user have been defined like admin, user, Advertisement, Caterers and their respective activities are shown here.

3.7 Data Modeling

3.7.1 Sequence Diagram

Sequence diagrams are sometimes called event diagrams or event scenarios. A sequence diagram shows, as parallel vertical lines (lifelines), different processes or objects that live simultaneously, and, as horizontal arrows, the messages exchanged between them, in the order in which they occur.

Here the sequence of the admin is shown managing the sequence of activities performed by him like login success, car management, pooling management, car route management, driver's management, and at last the database is shown were all the details is stored, updated and fetched from it.



Admin Sequence diagram for Delician

Figure 1:Sequence Diagram for Admin

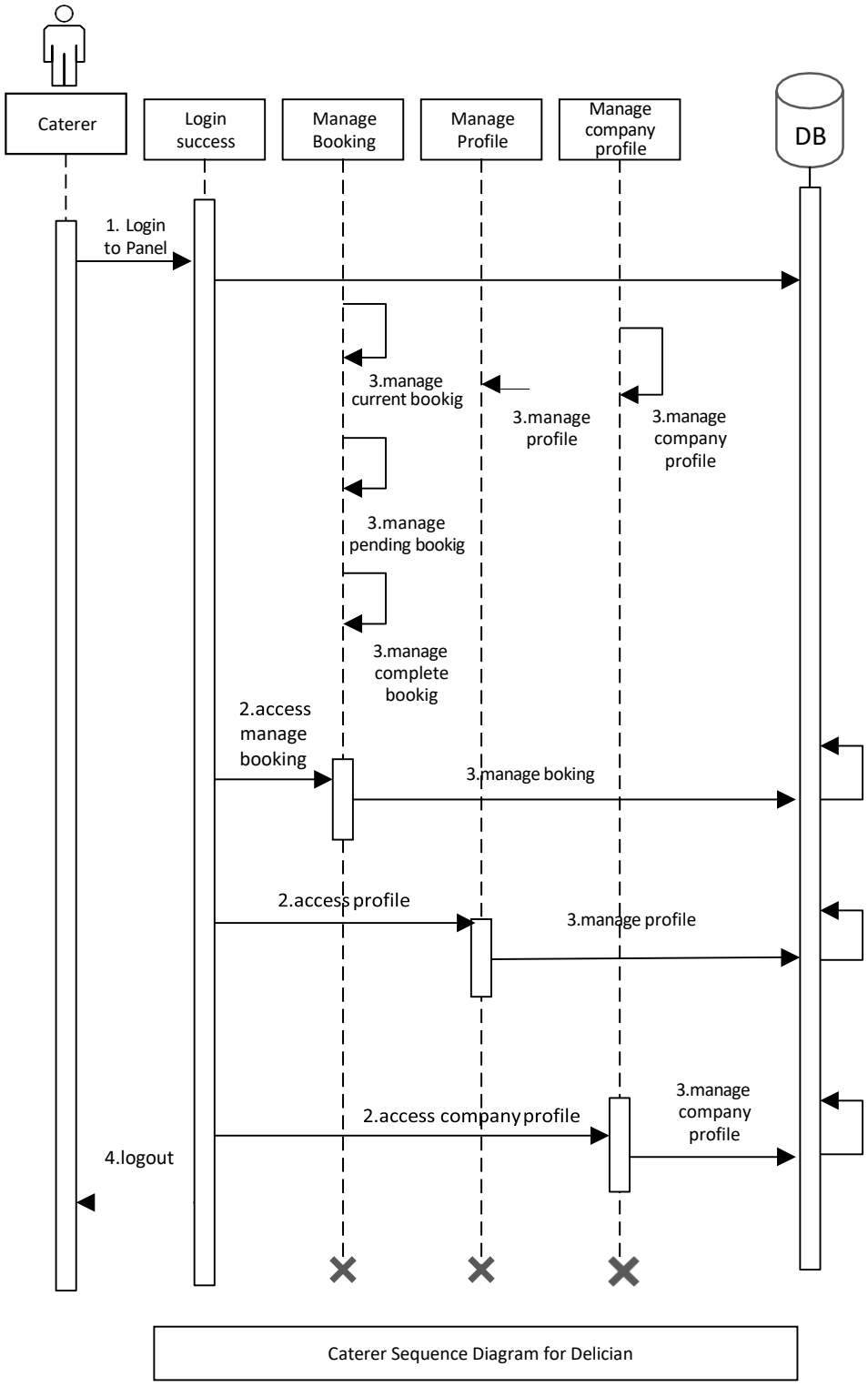


Figure 2: Sequence Diagram for Caterer

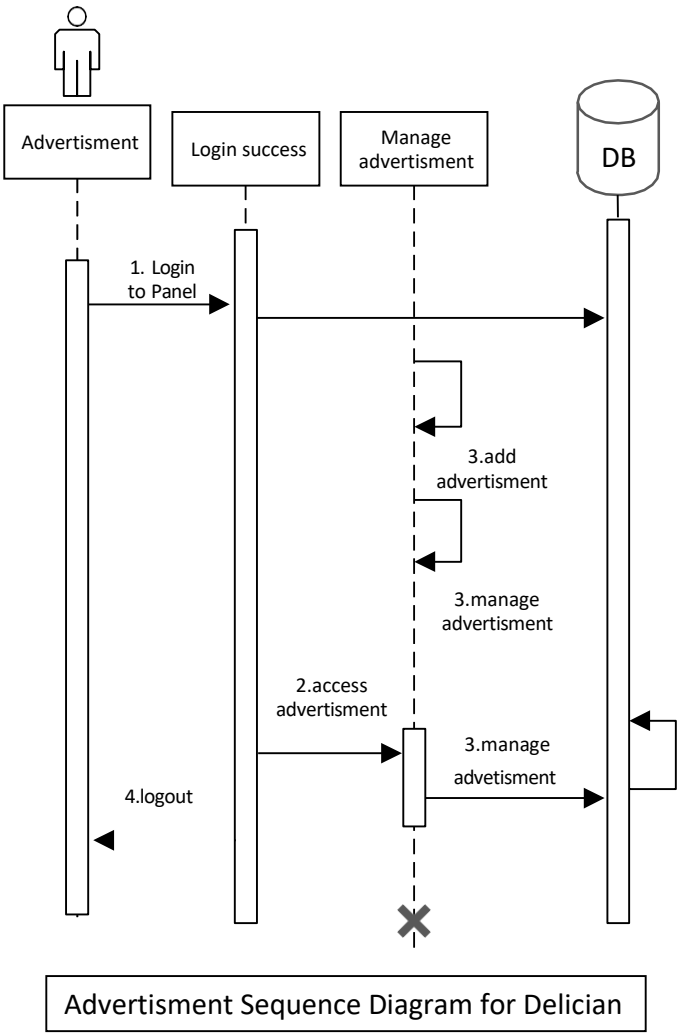


Figure 3: Sequence Diagram for Advertiser

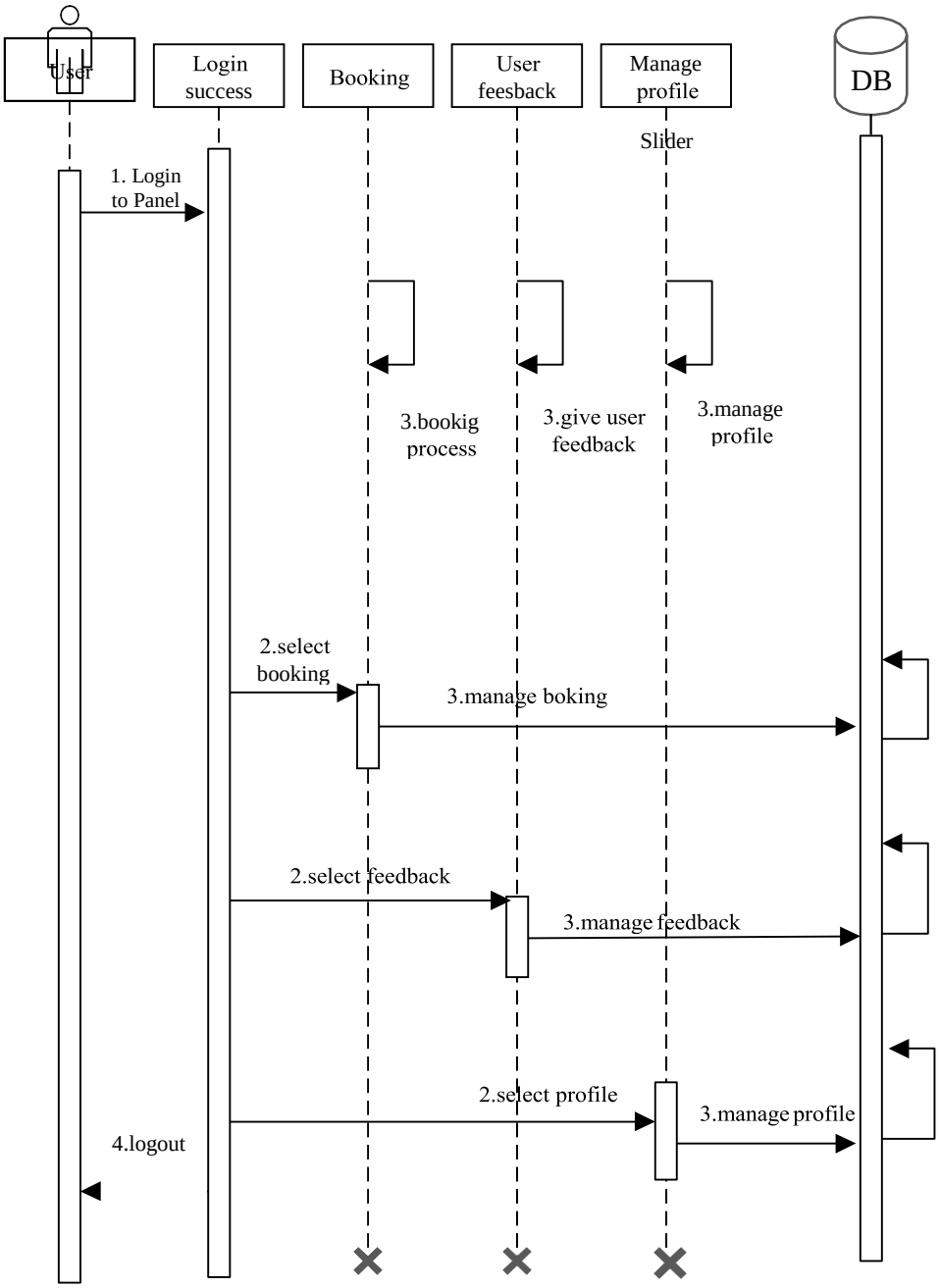


Figure 4:Sequence Diagram for User

User Sequence Diagram for Delician

3.7.2 Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow is drawn from one operation to another. Activity diagram showing the different activities of the user which are going to performed by him using the application. All the activities have been shown and optional activities are shown in fork and join with start and end symbol.

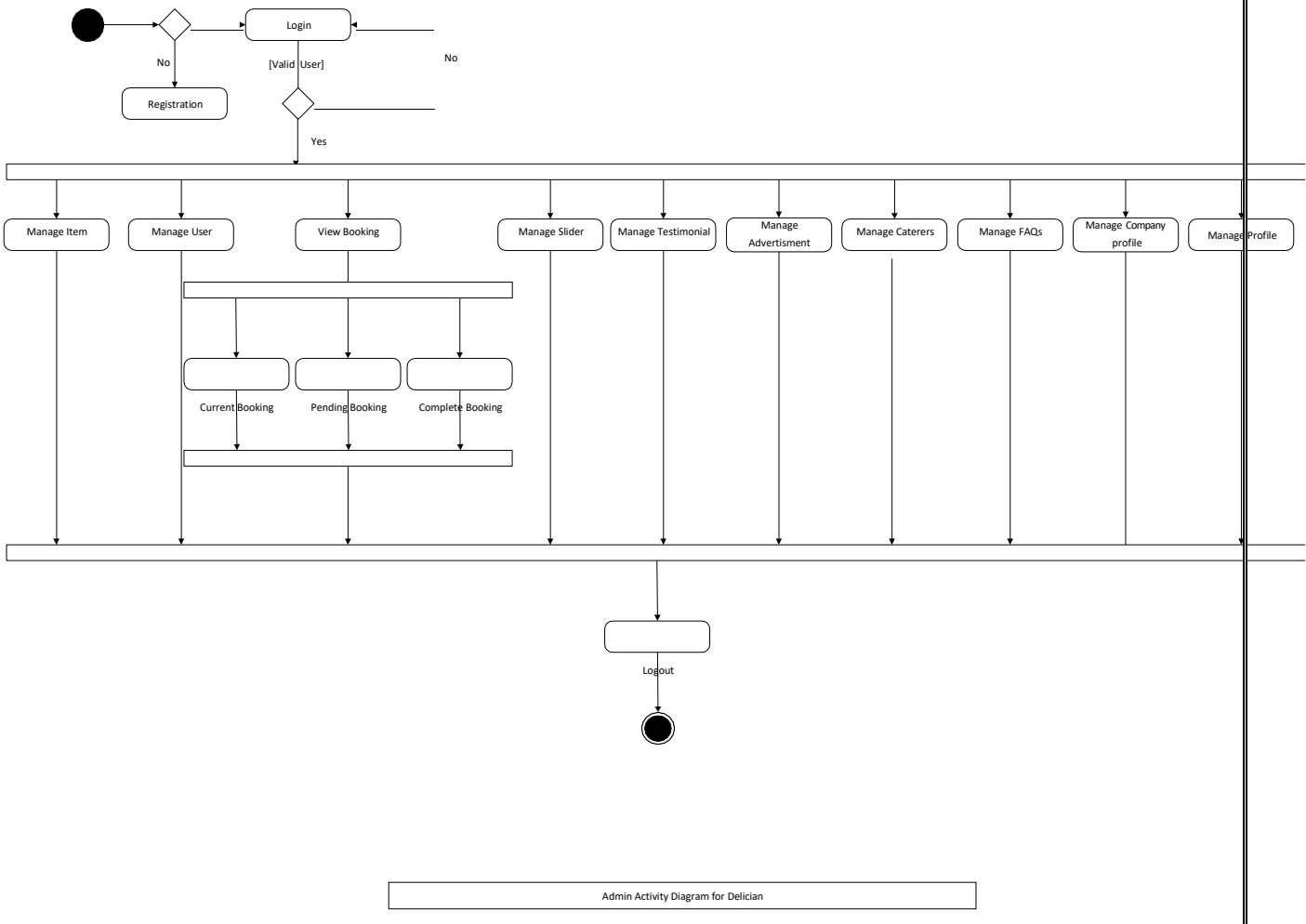


Figure 5: Activity Diagram for Admin

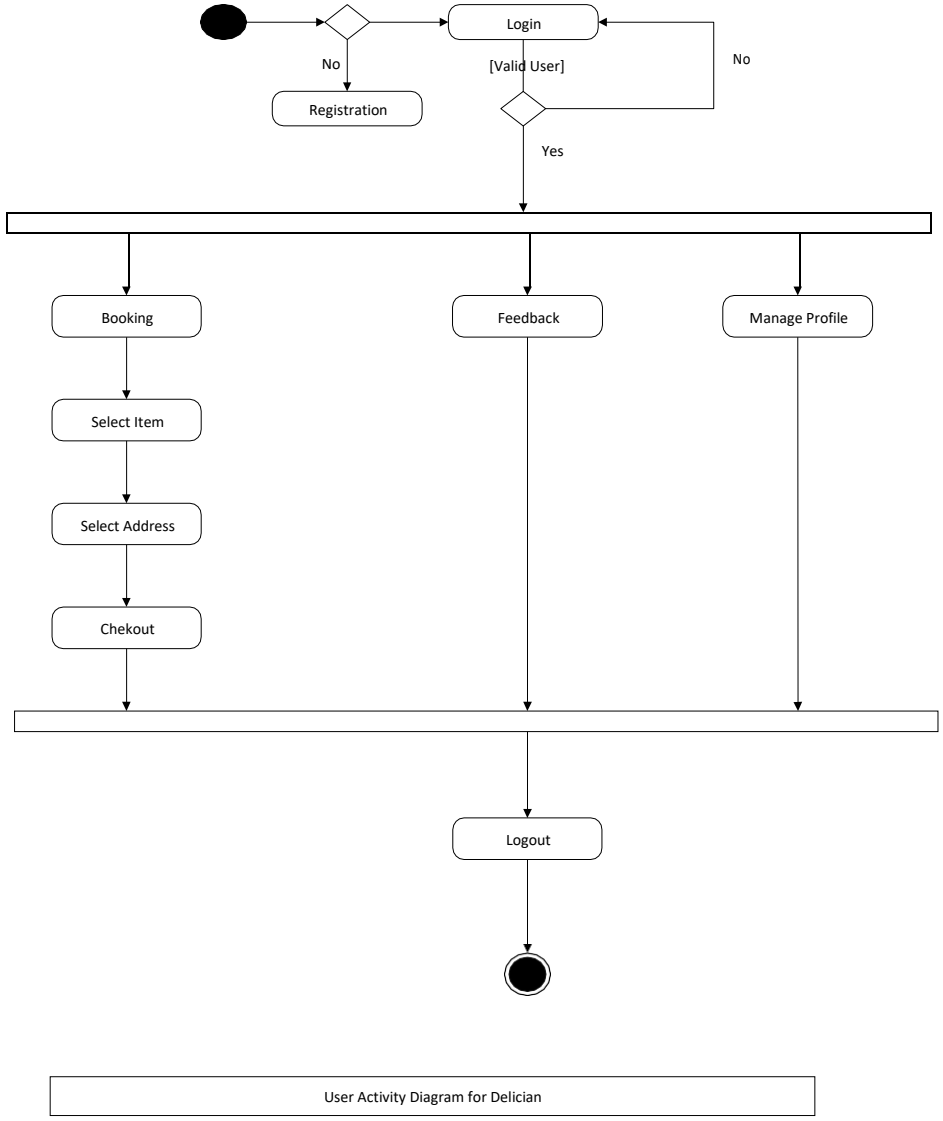


Figure 6: Activity Diagram for user

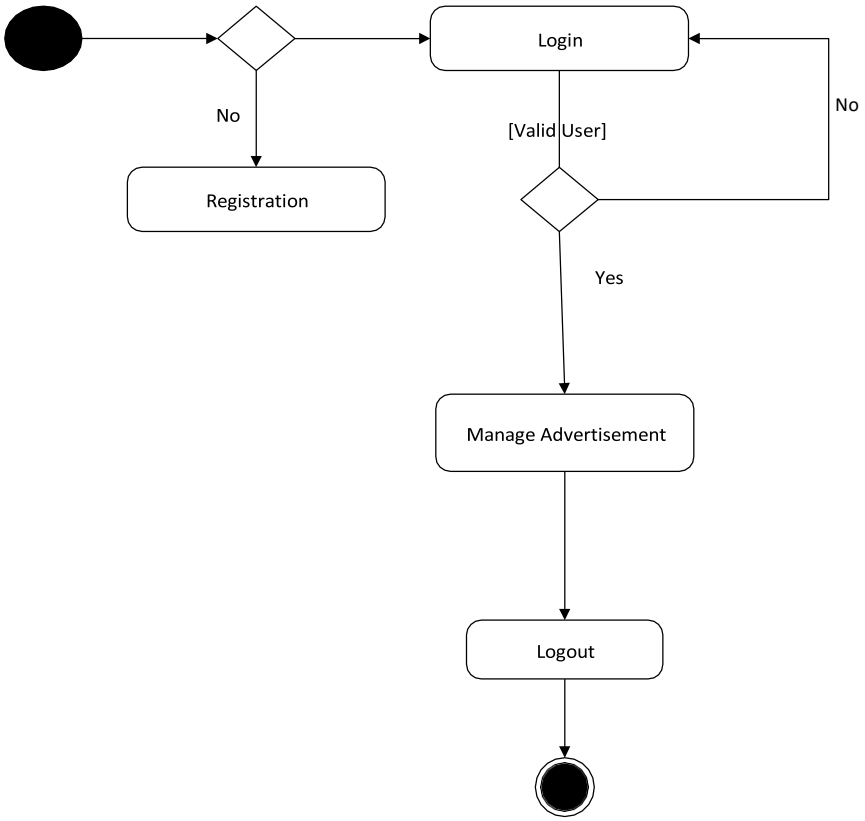


Figure 7:Activity Diagram for Advertiser

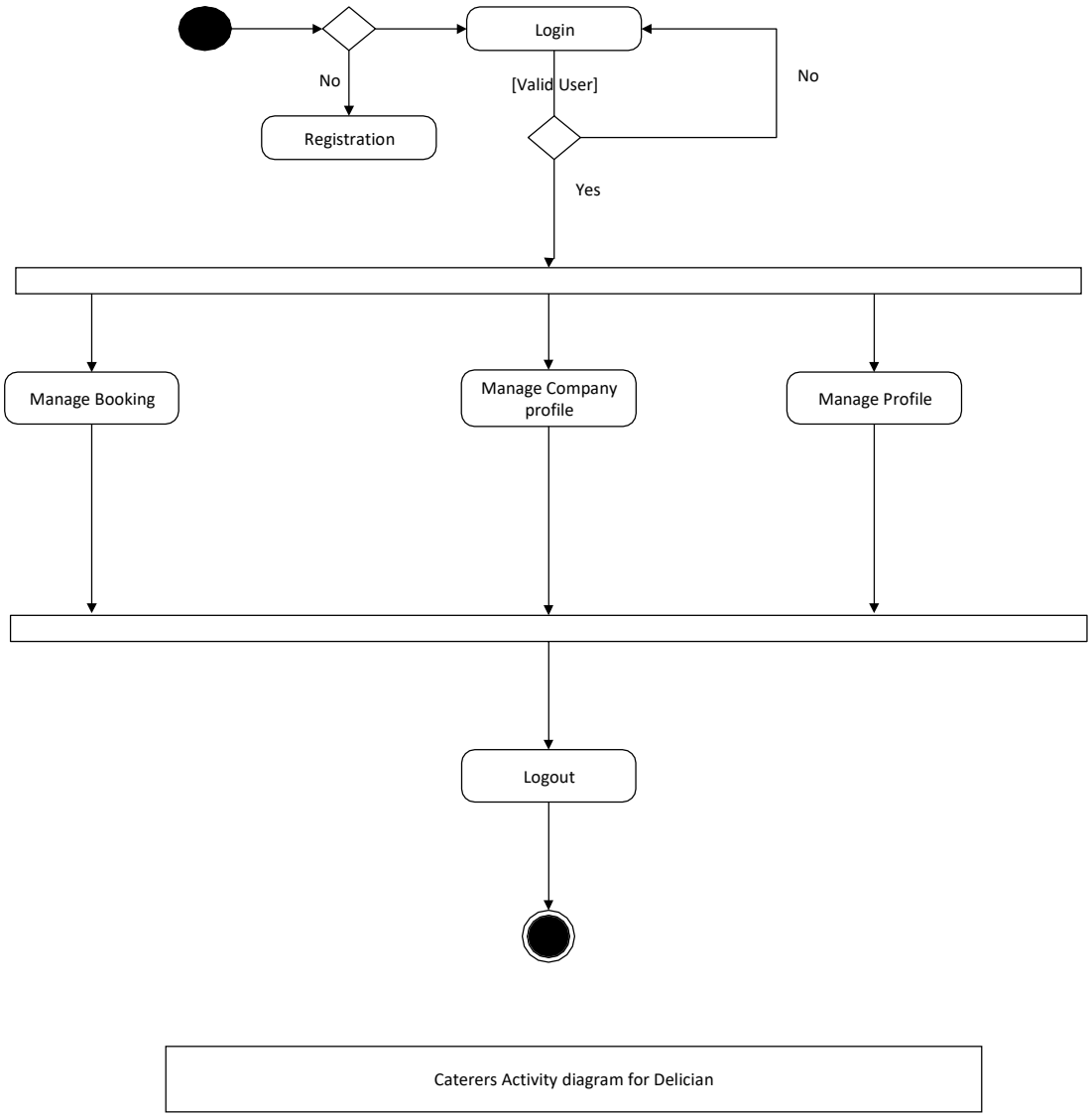


Figure 8:Activity Diagram for Caterer

3.7.3 Class Diagram

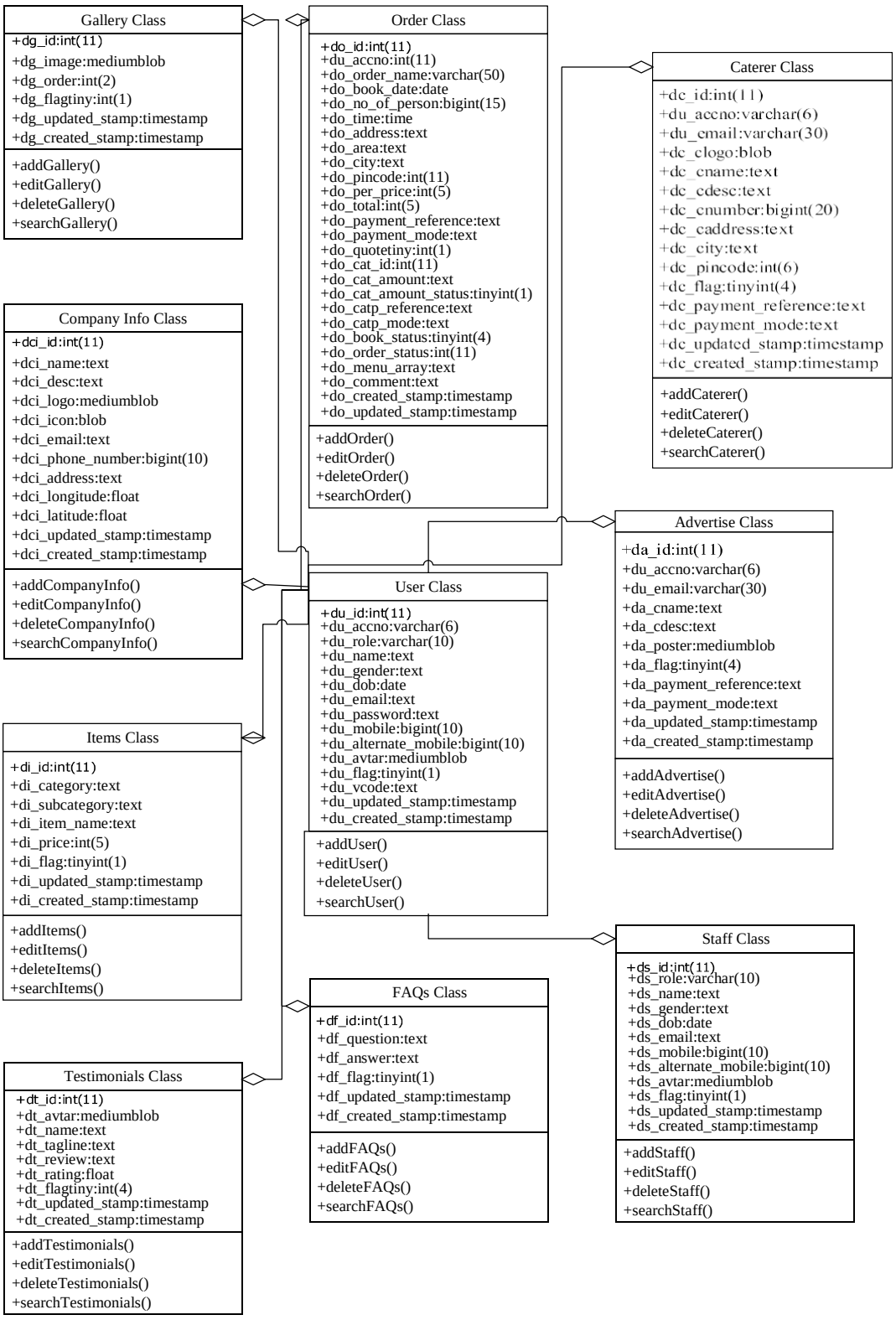


Figure 9:Class Diagram

3.7.4 Data Flow Dictionary

☐**Advertiser table**

Column	Type	Null	Default	Extra	Comments
da_id	int(11)	No		auto_increment	(Backend Purpose)
du_accno	varchar(6)	No			ID for Advertiser
du_email	varchar(30)	No			Email for Advertiser
da_cname	text	Yes	NULL		Company name of Advertiser
da_cdesc	text	Yes	NULL		Description of Advertise company
da_poster	mediumblob	Yes	NULL		Poster for Advertise
da_flag	tinyint(4)	Yes	0		Status of Advertise Account
da_payment_reference	text	Yes	NULL		Payment Reference Nu,ber
da_payment_mode	text	Yes	NULL		Payment Mode
da_updated_stamp	timestamp	Yes	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
da_created_stamp	timestamp	Yes	CURRENT_TIMESTAMP		(Backend Purpose)

☐**Caterer Table**

Column	Type	Null	Default	Extra	Comments
dc_id	int(11)	No		auto_increment	(Backend Purpose)
du_accno	varchar(6)	Yes	NULL		Caterer ID
du_email	varchar(30)	Yes	NULL		Caterer Email
dc_clogo	blob	Yes	NULL		Company Logo
dc_cname	text	Yes	NULL		Caterer Company Name
dc_cdesc	text	Yes	NULL		Caterer Company Description
dc_cnumber	bigint(20)	Yes	NULL		Caterer Contact Person Number
dc_caddress	text	Yes	NULL		Caterer Company Address
dc_city	text	Yes	NULL		Company City
dc_pincode	int(6)	Yes	NULL		Company Pincode
dc_flag	tinyint(4)	No	0		Caterer Service Flag
dc_payment_reference	text	Yes	NULL		Caterer Payment Reference Number
dc_payment_mode	text	Yes	NULL		Payment Mode
dc_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
dc_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐Company Info table

Column	Type	Null	Default	Extra	Comments
dci_id	int (11)	No		auto_increment	(Backend Purpose)
dci_name	text	No			Company name
dci_desc	text	No			Company name desc
dci_logo	mediumblob	No			Company logo
dci_icon	blob	No			Company icon
dci_email	text	No			Company Email
dci_phone_number	bigint(10)	No			Company phone number
dci_address	text	No			Company Address
dci_longitude	float	No			Map Longitude
dci_latitude	float	No			Map Latiitude
dci_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
dci_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐FAQs table

Column	Type	Null	Default	Extra	Comments
dci_id	int(11)	No		auto_increment	(Backend Purpose)
dci_name	text	No			Company name
dci_desc	text	No			Company name desc
dci_logo	mediumblob	No			Company logo
dci_icon	blob	No			Company icon
dci_email	text	No			Company Email
dci_phone_number	bigint(10)	No			Company phone number
dci_address	text	No			Company Address
dci_longitude	float	No			Map Longitude
dci_latitude	float	No			Map Latiitude
dci_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
dci_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐Feedback table

Column	Type	Null	Default	Extra	Comments
df_id	int(11)	No		auto_increment	Unique Id of the feedback
do_cat_id	int(11)	No			Caterer ID
du_accno	int(11)	No			User Accno
df_order_name	text	Yes	NULL		Order ID
df_message	tinytext	Yes	NULL		Message by the user
df_service	varchar(50)	Yes	NULL		Service rating given by the user
df_food	varchar(50)	Yes	NULL		Food rating given by the user
df_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
df_created_stamp	timestamp	Yes	CURRENT_TIMESTAMP		(Backend Purpose)

☐Gallery table

Column	Type	Null	Default	Extra	Comments
dg_id	int(11)	No		auto_increment	(Backend Purpose)
dg_image	mediumblob	Yes	NULL		Slider Image
dg_order	int(2)	Yes	NULL		Slider Image Order
dg_flag	tinyint(1)	No	0		Slider image View Status
dg_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
dg_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐Items table

Column	Type	Null	Default	Extra	Comments
di_id	int(11)	No		auto_increment	(Backend Purpose)
di_category	text	Yes	NULL		Item's Category
di_subcategory	text	Yes	NULL		Item's Subcategory
di_item_name	text	Yes	NULL		Item's Name
di_price	int(5)	Yes	0		Item's Price
di_flag	tinyint(1)	No	0		Item's View Status
di_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
di_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐Order table

Column	Type	Null	Default	Extra	Comments
do_id	int(11)	No		auto_increment	Unique Id of order
du_accno	int(11)	Yes	NULL		User Id
do_order_name	varchar(50)	Yes	NULL		Order Name
do_book_date	date	Yes	NULL		Booking Date
do_no_of_person	bigint(15)	Yes	NULL		No of Person
do_time	time	Yes	NULL		Time of the event
do_address	text	Yes	NULL		Address of the event
do_area	text	Yes	NULL		Area of User Adress
do_city	text	Yes	NULL		City of User Address
do_pincode	int(11)	Yes	NULL		Pincode
do_per_price	int(5)	Yes	NULL		Per Plate Price
do_total	int(5)	Yes	NULL		Total Price
do_payment_reference	text	Yes	NULL		Payment Reference
do_payment_mode	text	Yes	NULL		Payment Mode
do_quote	tinyint(1)	No	0		(Backend Purpose)
do_cat_id	int(11)	Yes	NULL		Caterer Id
do_cat_amount	text	Yes	NULL		Caterer Amount
do_cat_amount_status	tinyint(1)	Yes	0		Caterer payment Status
do_catp_reference	text	Yes	NULL		Caterer Payment Reference
do_catp_mode	text	Yes	NULL		Caterer Payment Mode
do_book_status	tinyint(4)	No	0		Booking Status
do_order_status	int(11)	Yes	NULL		Order Status 0-order_book,1-order_reject,2-catere_assign,3-order_complete,4-payment_done
do_menu_array	text	Yes	NULL		Menu Saved as array
do_comment	text	No			Comments of Order
do_created_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
do_updated_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐Staff table

Column	Type	Null	Default	Extra	Comments
ds_id	int(11)	No		auto_increment	(Backend Purpose)
ds_role	varchar(10)	No			Staff's Role
ds_name	text	No			Staff's Name
ds_gender	text	No			Staff's Gender
ds_dob	date	No			Staff's Date Of Birth
ds_email	text	No			Staff's Email
ds_mobile	bigint(10)	No			Staff's Mobile Number
ds_alternate_mobile	bigint(10)	No			Staff's Alternate Mobile Number
ds_avtar	mediumblob	No			Staff's Profile Picture
ds_flag	tinyint(1)	No	0		Staff's Visibility
ds_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
ds_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐Testimonials table

Column	Type	Null	Default	Extra	Comments
dt_id	int(11)	No		auto_increment	(Backend Purpose)
dt_avtar	mediumblob	Yes	NULL		Image of users
dt_name	text	Yes	NULL		Name of user
dt_tagline	text	Yes	NULL		Tagline by User
dt_review	text	No			Words by users
dt_rating	float	No			Rating by user
dt_flag	tinyint(4)	No	0		Visibility of Testimonials
dt_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
dt_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

☐User table

Column	Type	Null	Default	Extra	Comments
du_id	int(11)	No		auto_increment	(Backend Purpose)
du_accno	varchar(6)	No			(Backend Purpose)
du_role	varchar(10)	Yes	user		User's Role
du_name	text	Yes	NULL		User's Name
du_gender	text	Yes	NULL		User's Gender
du_dob	date	Yes	NULL		User's Date Of Birth
du_email	text	No			User's Email
du_password	text	No			User's Password
du_mobile	bigint(10)	Yes	NULL		User's Mobile Number
du_alternate_mobile	bigint(10)	Yes	NULL		User's Alternate Mobile Number
du_avtar	mediumblob	Yes	NULL		User's Profile Picture
du_flag	tinyint(1)	Yes	0		User's Status of Account
du_vcode	text	Yes	NULL		For verification Purpose
du_updated_stamp	timestamp	No	CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP	(Backend Purpose)
du_created_stamp	timestamp	No	CURRENT_TIMESTAMP		(Backend Purpose)

3.8 Canvas

3.8.1 AEIOU Canvas

This canvas described about different factors like activities, environment, interactions, objects, users.

Environment:

- School
- Home
- Banquet
- College
- Office

Interactions:

- Event Organizer - System Admin
- Event Organizer – System
- System Admin – Admin

Objects:

- Smartphone
- Laptop
- Computer
- Tablet

Activities:

- Registration
- Login
- Booking
- Testimonial
- Advertisement
- Caterers
- Rating
- Logout

Users:

- Event Organizer
- Event Manager

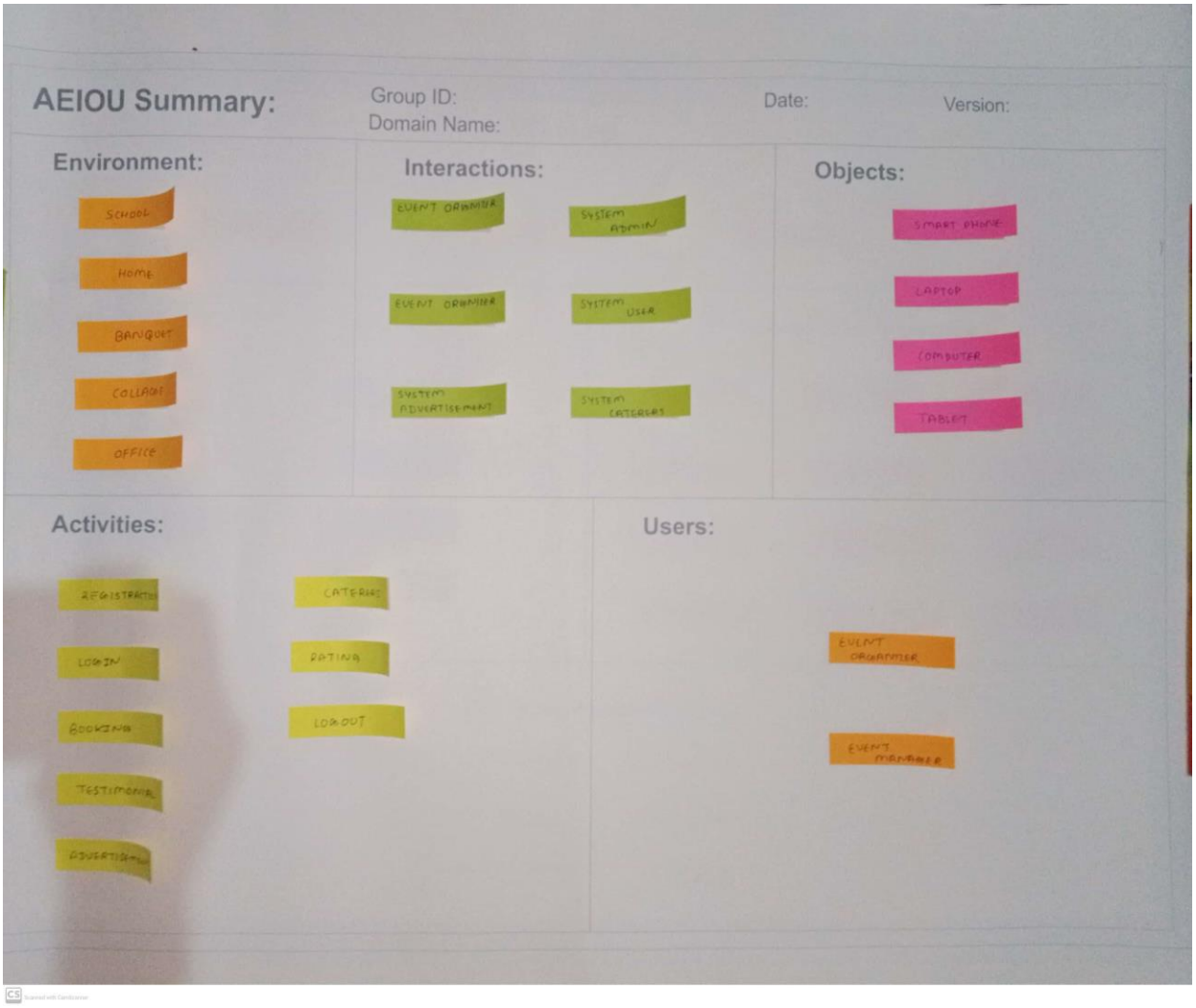


Figure 10:AEIOU Canvas

3.8.2 Ideation Canvas

This canvas generates idea regarding situation, components and props used to design project.

People:

- Admin
- User
- Caterers

Activities:

- Registration
- Login
- Booking
- Testimonial
- Advertisement
- Caterers
- Rating
- Logout

Situation/Context/Location:

- Marriage/Function/Home
- Farewell/Party/Office
- Birthday/Party/Home
- Reception/Function/Banquet

Probs/Possible Solution:

- Offline Booking/Online Booking
- Different Situation/One Solution
- Time Consuming/Instant Booking

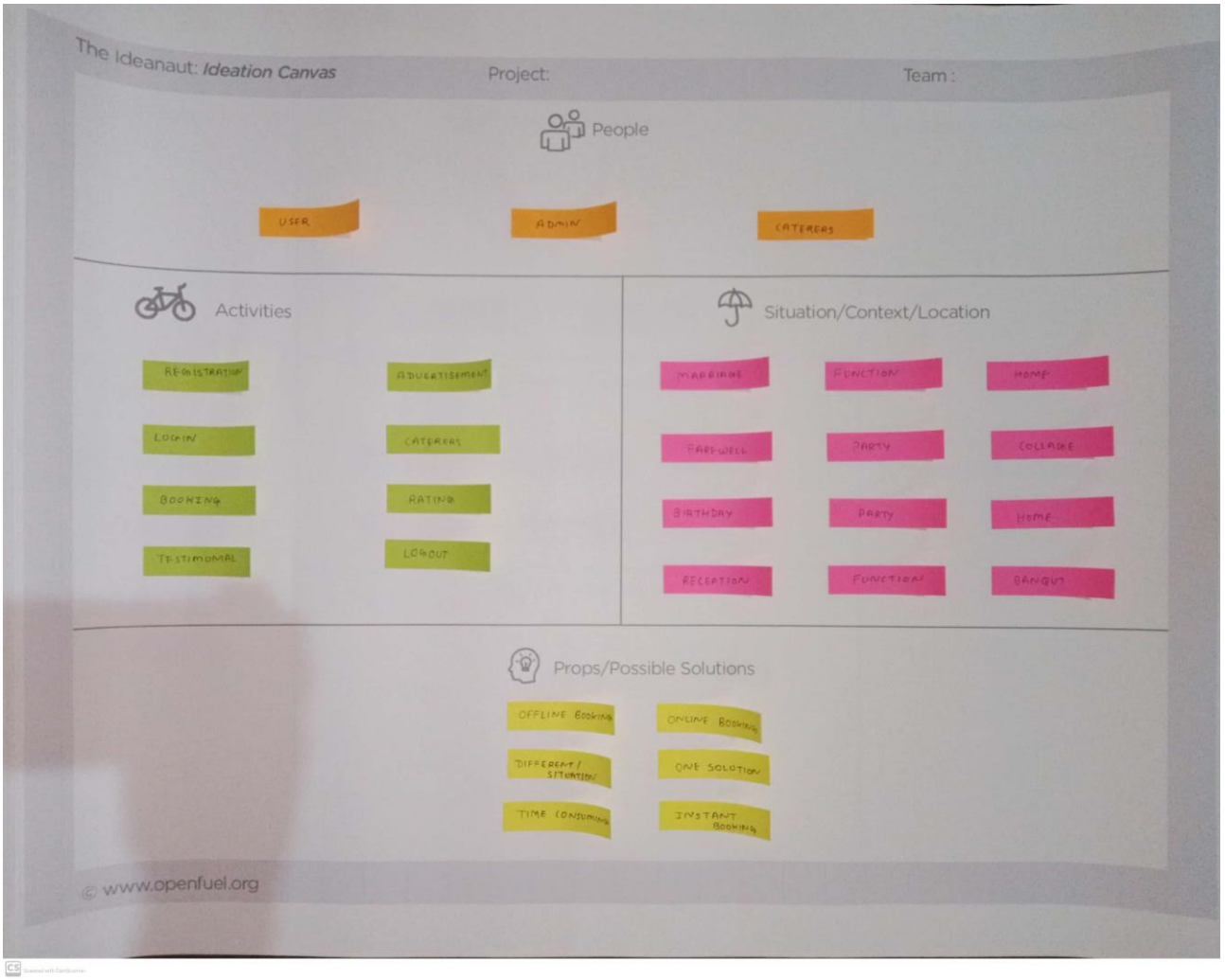


Figure 11:Ideation Canvas

3.8.3 Product Development Canvas

This canvas actually is based upon the final outcome of project and about customers' interaction with the developers.

People:

- Admin
- User
- Caterers

Product Experience:

- Intuitive & Clean
- Feature Rich
- Nice User Interface
- Easy to use

Product Function:

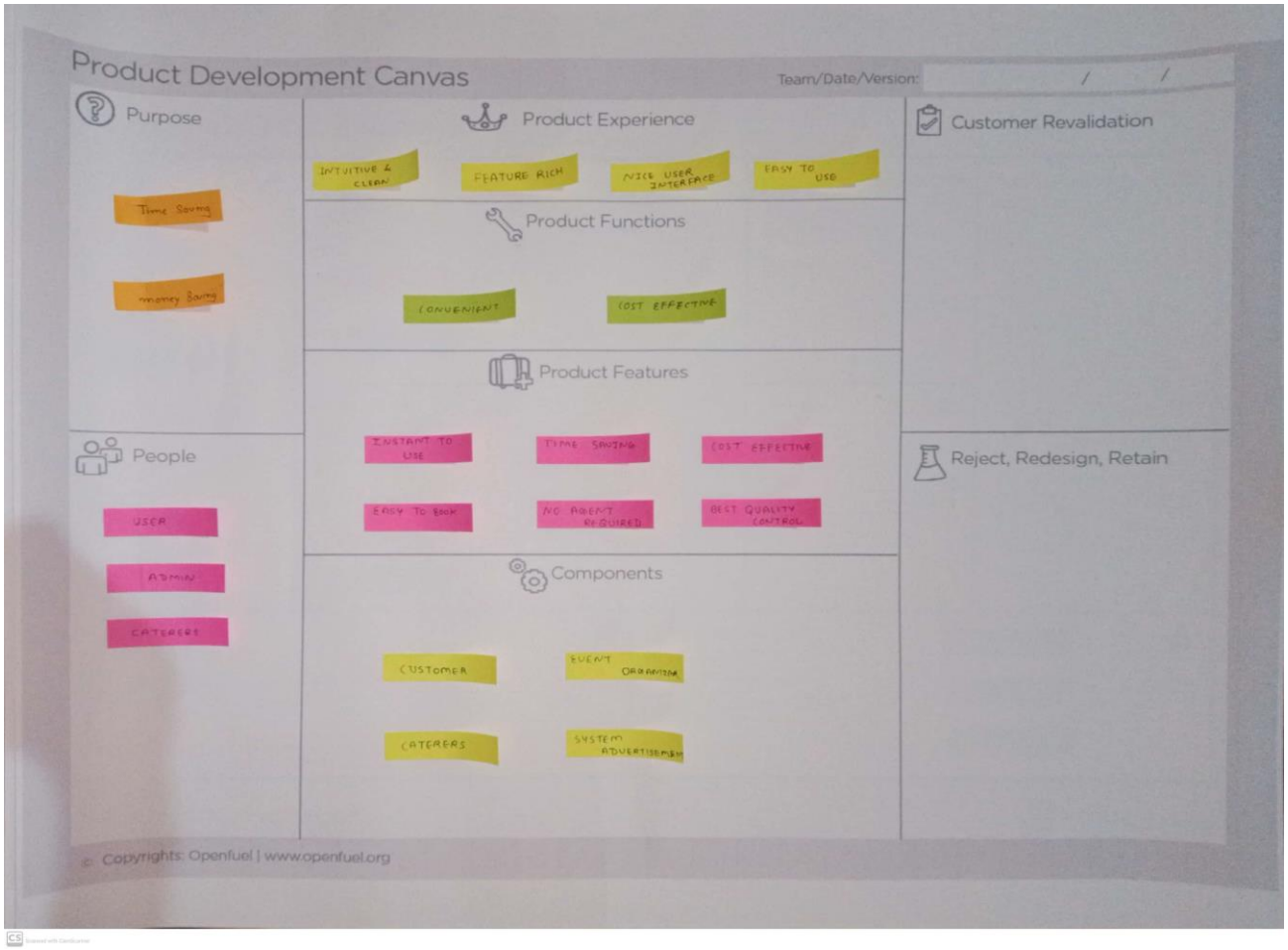
- Cost Effective
- Convenient

Product Feature:

- Instant to Use
- Time Saving
- Cost Effective
- Easy to Book
- No Agent Required

Components:

- Event Organizer
- System Admin
- Customer
- Caterers


Product Development Canvas
Team/Date/Version:
Purpose
Time Saving
money Saving
Product Experience
INTUITIVE & CLEAN
FEATURE RICH
NICE USER INTERFACE
EASY TO USE
Product Functions
CONVENIENT
COST EFFECTIVE
Product Features
INSTANT TO USE
TIME SAVING
COST EFFECTIVE
EASY TO BOOK
NO AGENT REQUIRED
BEST QUALITY CONTROL
Components
CUSTOMER
EVENT ORGANISER
CATERERS
SYSTEM ADVERTISEMENT
Customer Revalidation
Reject, Redesign, Retain
People
USER
ADMIN
CATERERS
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3.8.4 Empathy Mapping Canvas

This canvas helps us reveal real life stories with the development of the project whether it can be sad or happy.

User:

- Event Organizer
- Event Manager

Stakeholders:

- Event Organizer

Activities:

- Registration
- Login
- Booking
- Testimonial
- Advertisement
- Caterers
- Rating
- Logout

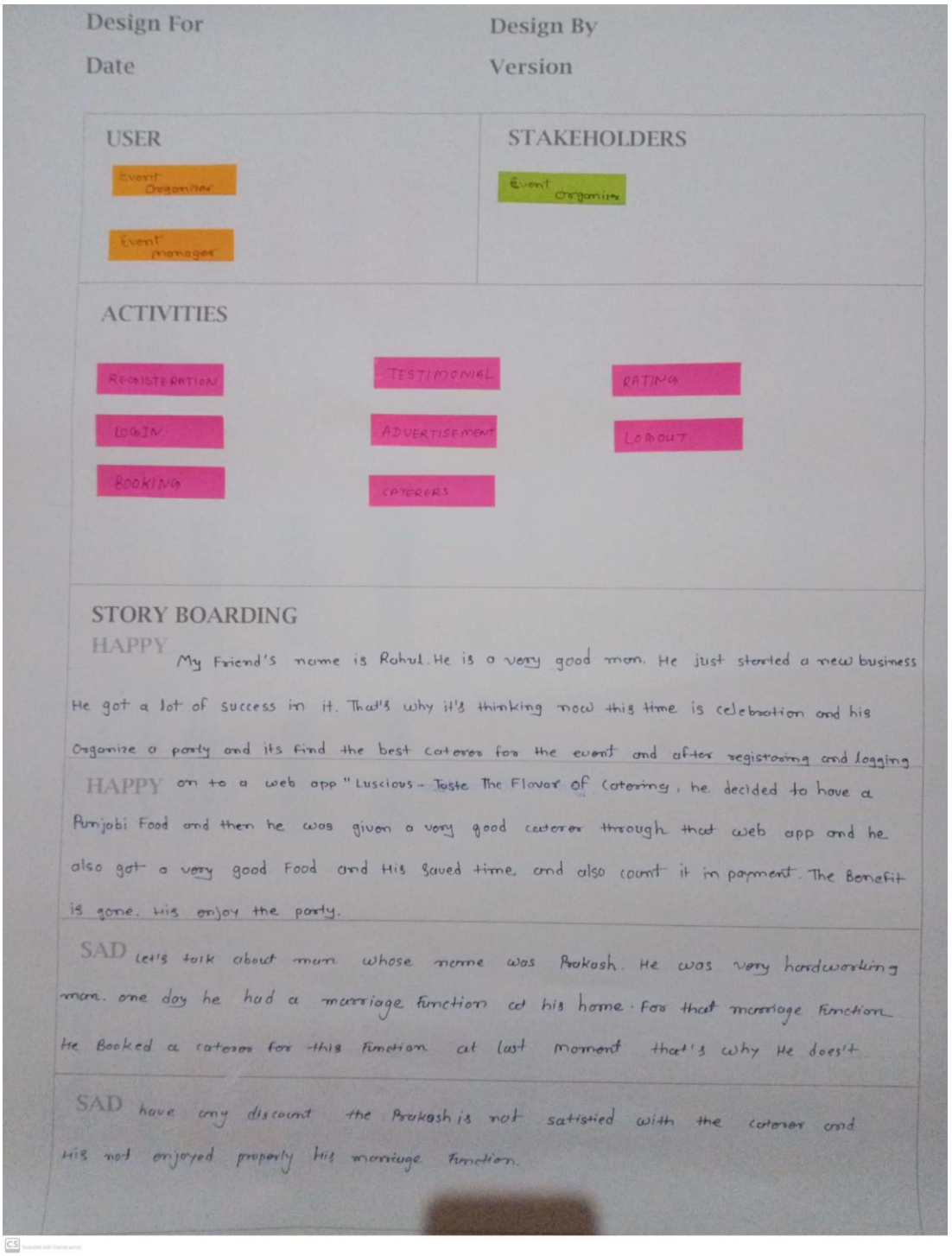

Figure 13:Empathy Mapping Canvas

3.10 Business Model Canvas

This canvas helps us reveal real life use with the development of the project.

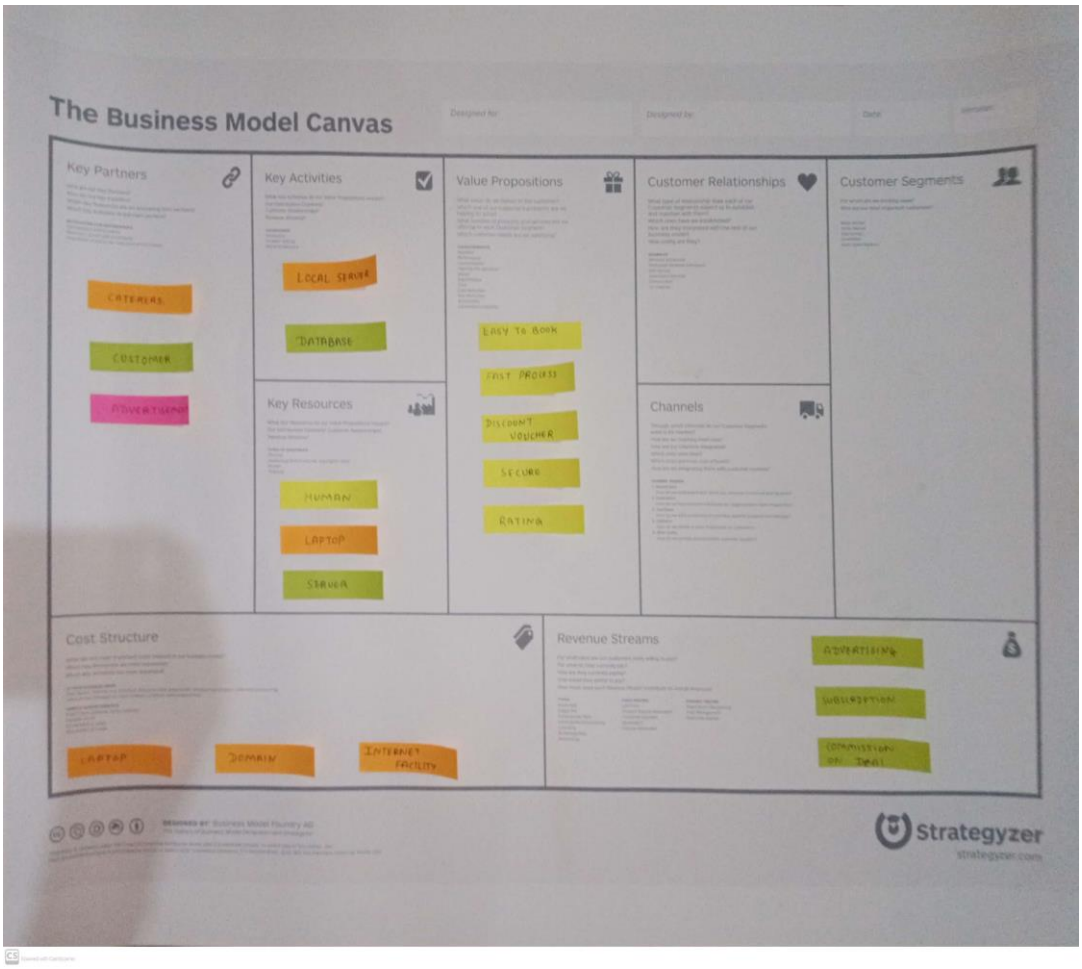

Figure 14:Business Model Canvas

4. Testing Plan

Test plan: A document describing the scope, approach, resources and schedule of intended test activities. It identifies amongst others test items, the features to be tested, the testing tasks, who will do each task, degree of tester independence, the test environment, the test design techniques and entry and exit criteria to be used, and the rationale for their choice and any risks requiring contingency planning. It is a record of the test planning process.

Master test plan: A test plan that typically addresses multiple test levels.

Phase test plan: A test plan that typically addresses one test phase.

4.1 Test Plan Template

The format and content of a software test plan vary depending on the processes, standards, and test management tools being implemented. Nevertheless, the following format, which is based on IEEE standard for software test documentation, provides a summary of what a test plan should contain.

Test Plan Identifier:

- Provide a unique identifier for the Document.

Introduction:

- Provide an overview of the test plan.
- Specify the goals/objectives.
- Specify any constraints.

References:

- Project Plan
- Configuration Management Plan

4.2 Testing strategy

4.2.1 Black-Box Testing:

The technique of testing without having any knowledge of the interior workings of the application is called black-box testing. The tester is oblivious to the system architecture and does not have

access to the source code. Typically, while performing a black-box test, a tester will interact with the system's user interface by providing inputs and examining outputs without knowing how and where the inputs are worked upon.

☐The following table lists the advantages and disadvantages of black-box testing.

Advan-tages	**Disadvan-tages**
Well suited and efficient for large code segments.	Limited coverage, since only a selected number of test scenarios is actually performed
Code access is not required	Inefficient testing, due to the fact that the tester only has limited knowledge about an application
Clearly separates user's perspective from the developer's perspective through visibly defined roles	Blind coverage, since the tester cannot target specific code segments or error prone areas.
Large numbers of moderately skilled testers can test the application with no knowledge of implementation, programming language, or operating systems.	The test cases are difficult to design.

4.2.2 White-Box Testing:

- White-box testing is the detailed investigation of internal logic and structure of the code. White-box testing is also called glass testing or open-box testing. In order to perform white- box testing on an application, a tester needs to know the internal workings of the code. The tester needs to have a look inside the source code and find out which chunk of the code is behaving inappropriately.

The following table lists the Merits and Demerits of white-box testing.

Merits	Demerits
It helps in optimizing the code. Extra lines of code can be removed which can bring in hidden defects.	Sometimes it is impossible to look into every nook and corner to find out hidden errors that may create problems, as many paths will go untested.
As the tester has knowledge of the source code, it becomes very easy to find out which type of data can help in testing the application effectively	Due to the fact that a skilled tester is needed to perform white-box testing, the costs are increased
Due to the tester's knowledge about the code, maximum coverage is attained during test scenario writing.	It is difficult to maintain white-box testing, as it requires specialized tools like code analyzers and debugging tools

4.2.3 Grey-Box Testing:

- Grey-box testing is a technique to test the application with having a limited knowledge of the internal workings of an application. In software testing, the phrase the more you know, the better carries a lot of weight while testing an application.
- Tests the application's user interface; in grey-box testing, the tester has access to design documents and the database. Having this knowledge, a tester can prepare better test data and test scenarios while making a test plan.

Merits	Demerits
Offers combined benefits of black-box and white-box testing wherever possible.	Since the access to source code is not available, the ability to go over the code and test coverage is limi
Grey box testers don't rely on the source code; instead they rely on interface definition and functional specifications.	The tests can be redundant if the software designer already run a test case
Based on the limited information available, a grey-box tester can design excellent test scenarios especially around communication protocols and data type handling. The test is done from the point of view ofthe	Testing every possible input stream is unrealistic bec it would take an unreasonable amount of time; there many program paths will go untested.

4.3 Testing Method

4.3.1 Statistical Testing

A statistical test provides a mechanism for making quantitative decisions about a process or processes. The intent is to determine whether there is enough evidence to "reject" a conjecture or hypothesis about the process. The conjecture is called the null hypothesis. Not rejecting may be a good result if we want to continue to act as if we "believe" the null hypothesis is true. Or it may be a disappointing result, possibly indicating we may not yet have enough data to "prove" something by rejecting the null hypothesis.

4.3.2 Defect Testing

- The goal of defect testing is to discover defects in programs
- A successful defect test is a test which causes a program to behave in an anomalous way
- Tests show the presence, not the absence of defects
- Test data – Inputs which have been devised to test the system
- Test cases –Test data and the predicted outputs if the system operates according to its specification
- To understand testing techniques that are geared to discover program faults