# ITCS371 Introduction to Software Engineering



## Instructor

**Dr. Morakot Choetkiertikul**

## Project 1

### By

| | |
|---|---|
| **Mr.Radchapol Eianleng** | **6288076** |
| **Mr.Tamakorn Jiamrachada** | **6288081** |
| **Mr.Soranun Paisarnpong** | **6288100** |
| **Mr.Trisiri Chandanindara** | **6288158** |
| **Mr.Tawanchai Maneeon** | **6288176** |
| **Mrs.Thipwarin Chotchawa** | **6288177** |

**Faculty of Information and Communication Technology**

**Mahidol University 2021**

# Table of Contents

# Revision

For this phase 2 of project, we have listened for the feedback from Aj Morakot. We realized that we have a lot to improve and a lot to do. So, in this phase 2 we have to look back to some mistake and fix those mistakes in order to maintain the project in good shapes.

## Introduction

The main target of this project is to make the website for the customer who wants to make a booking reservation system website which calls Travel Najah System. Travel Najah System consists of four main functions. The first one is a Flight ticket reservation, The second one is the car rental reservation, the third one is a hotel booking reservation, and lastly Booking a local guide tour.

## Revision #1 Functional and Non-functional

2 things that need to fix is

➢ Non-Functional = Domain Exploration e.g., Booking.com Agoda.com
- It isn't belonged to Neither Functional or Non-Functional
➢ Non-Functional = Hotel/ car/ Flight recommend.
- Should be in the functional not non functional

### Functional

1. Flight booking reservation

2. Car rental reservation

3. Room booking hotel reservation

4. Local Guide tour reservation

5. API to book the Flight (to maintain the flight ticket)

6. API to Rent the car (to maintain the car reservation)

7. API to book the hotel (to maintain the hotel reservation)

8. All the details must up to date

9. All the user must be able to see the Published content.

10. Web application on the internet.

11. User consists of Front-end and Back-end

12. Only membership user can access the reservation system.

13. The system have to handle the list of available guides.

14. The system must allow the back-end user to manage the local guide

15. The system must allow the back-end user to manage the local guide
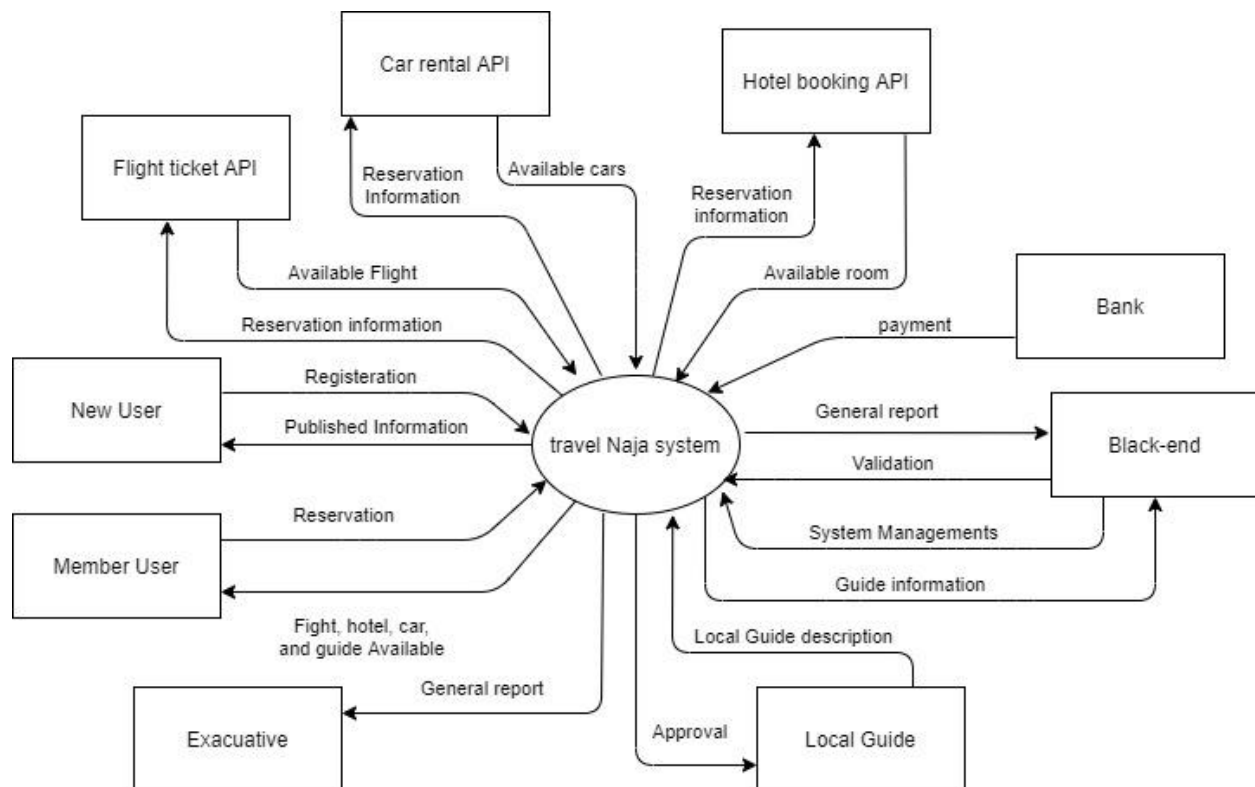
**16 Hotel, Flight and car recommend.** << Added


## Non-Functional

1. 1000 transaction per second transaction between internal and external

2. Security priority

3. The system have to provide the fight ticket to the customer first

4. The Platform must have an application for IOS/ Android devices

5. Search result that match the customer style

6. Domain Exploration e.g., Booking.com Agoda.com  << Removed

7. Customer style search system e.g., Car system recommend Fight class recommend Hotel model

8. Provide the native app to the app for the phone web user.

9. Hotel/ car/ Flight recommend. << Not belong to this category

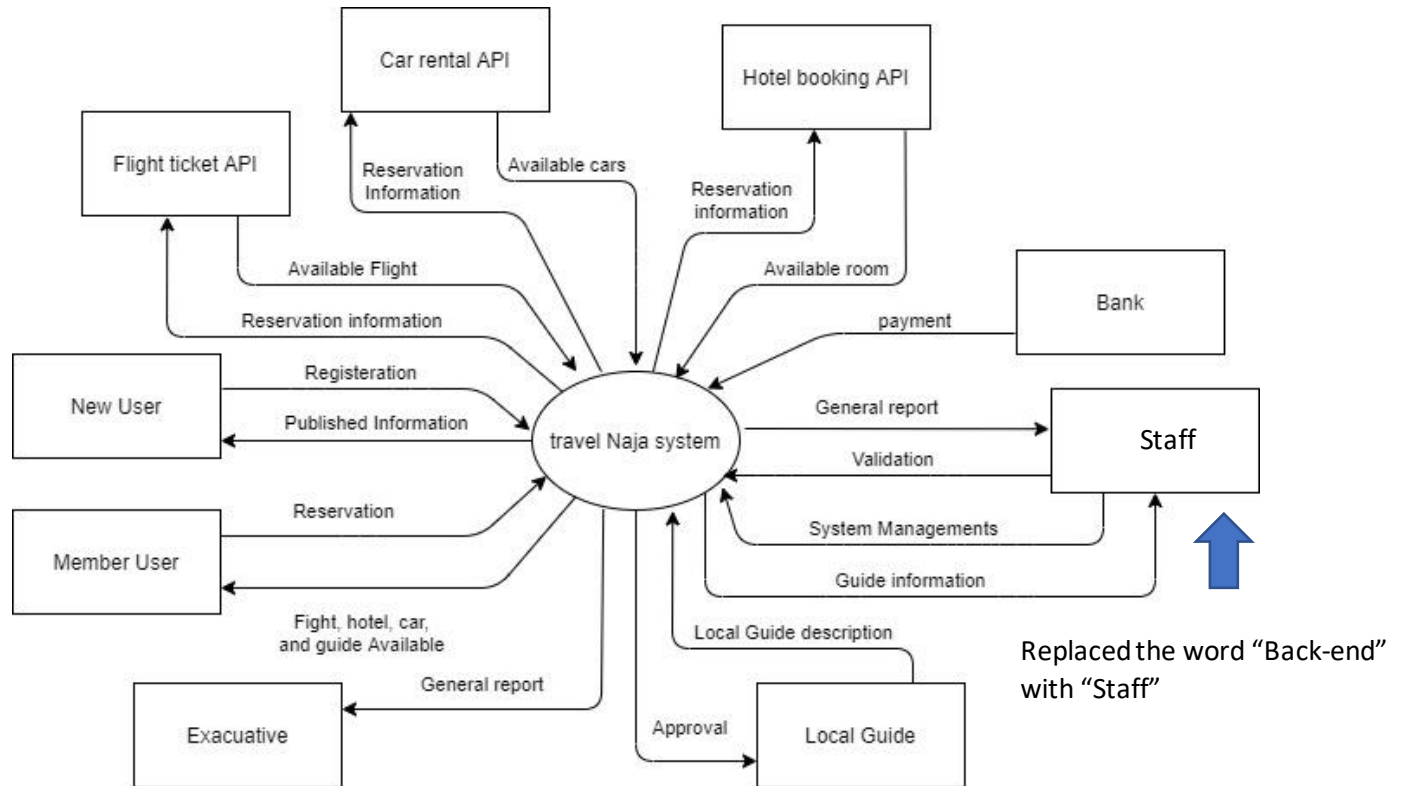10. Maximum Encryption technique for the website.


Revision #2 DFD Diagrams

Overall, of DFD diagram was perfect. However, it's is important for us to make them clear and perfect. Because it is necessary for the customer and the user to be able to understand our diagram. Also, it's help us recognize the important structure that we need to develop in phase 2.

OLD DFD Lv0 Diagram

Car rental API

Flight ticket API

Hotel booking API

Reservation Information

Available cars

Reservation information

Available Flight

Available room

Bank

Reservation information

payment

New User

Registeration

General report

Published Information

travel Naja system

Validation

Staff

Reservation

System Managements

Member User

Guide information

Fight, hotel, car, and guide Available

Local Guide description

Replaced the word "Back-end" with "Staff"

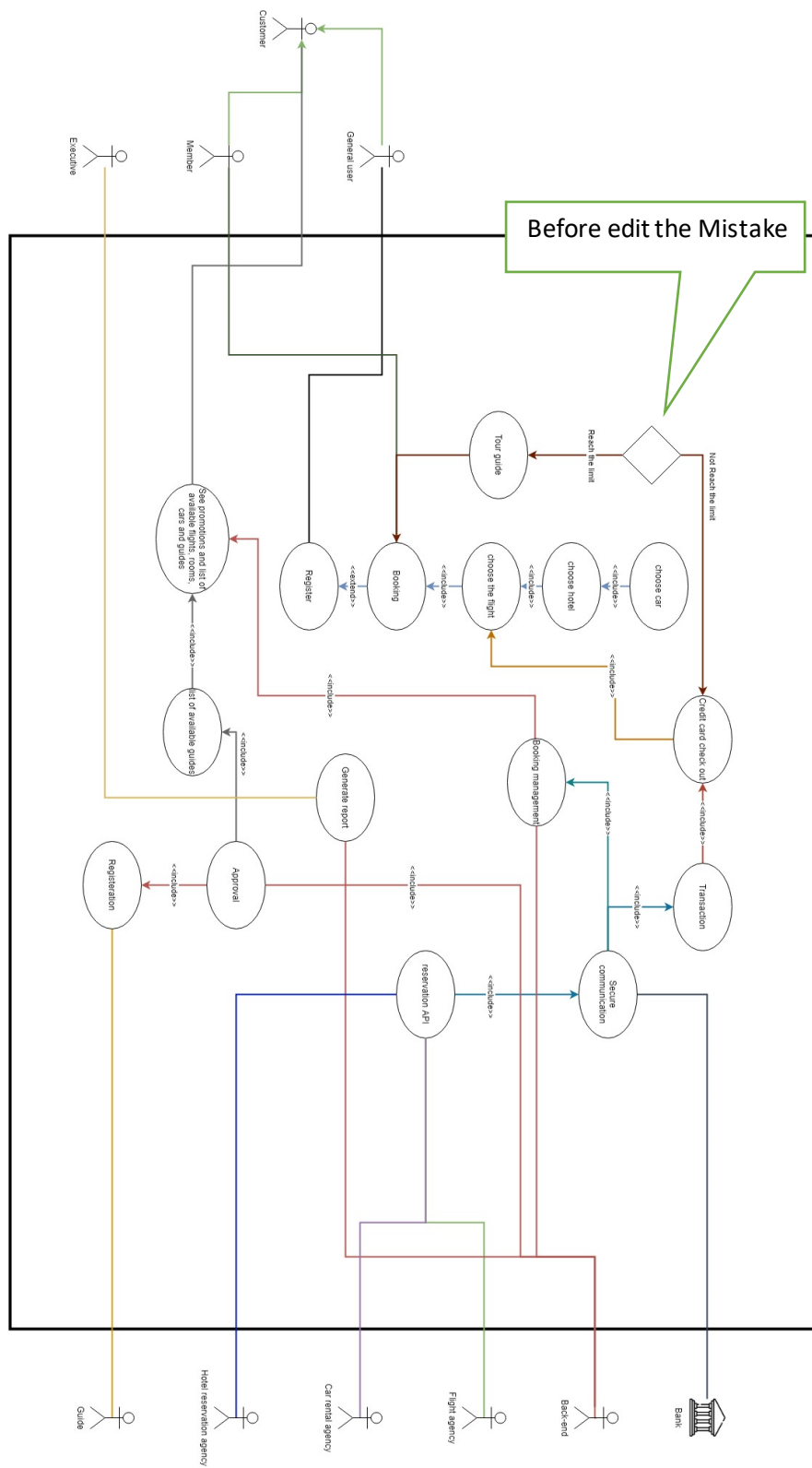General report

Approval

Local Guide

Exacutative

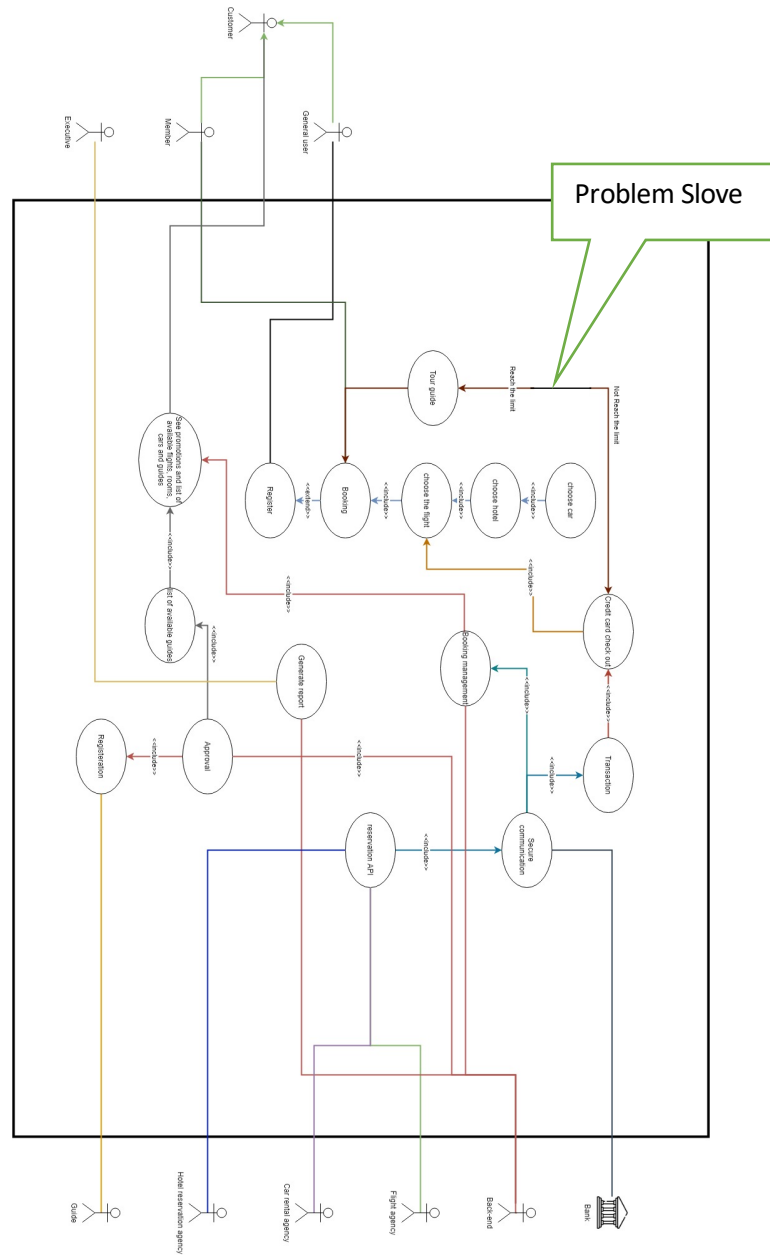In DFD diagram we replaced the word "Back-end" with "staff" to make things clear.

## Revision #3 Use case diagram
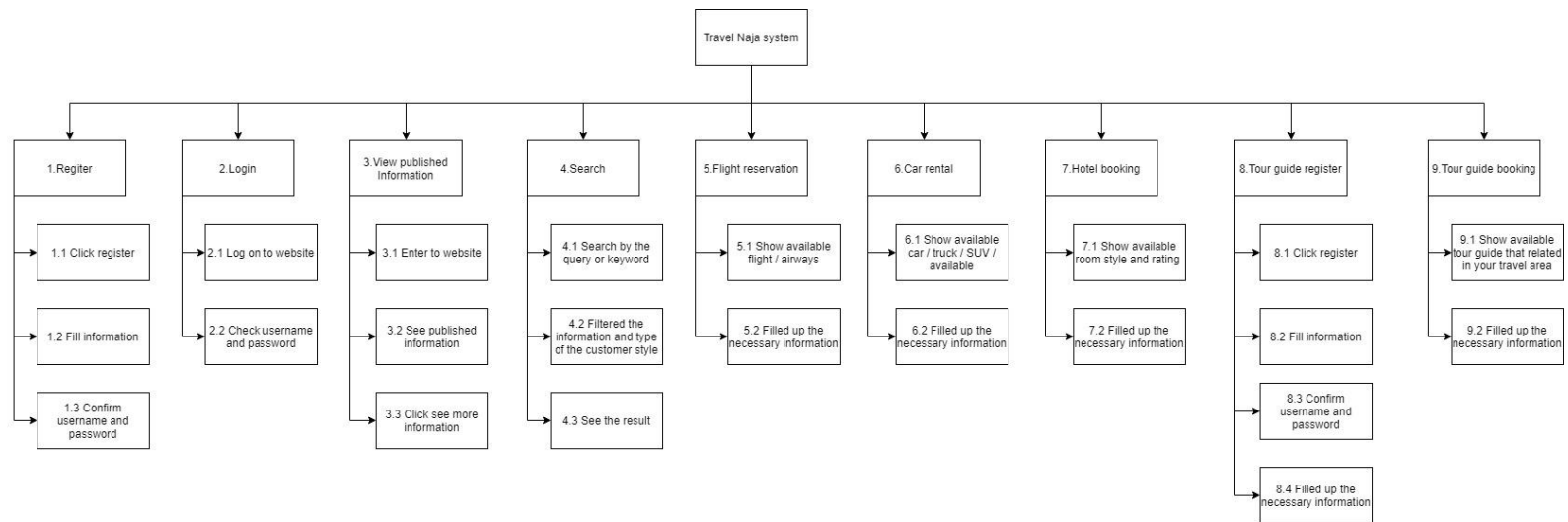
Use case Diagram

In the last time we made a mistake by putting the ⬦ Diagram. Which is incorrect. To make use case diagram completed we have to redesign and espically remove the ⬦ out.
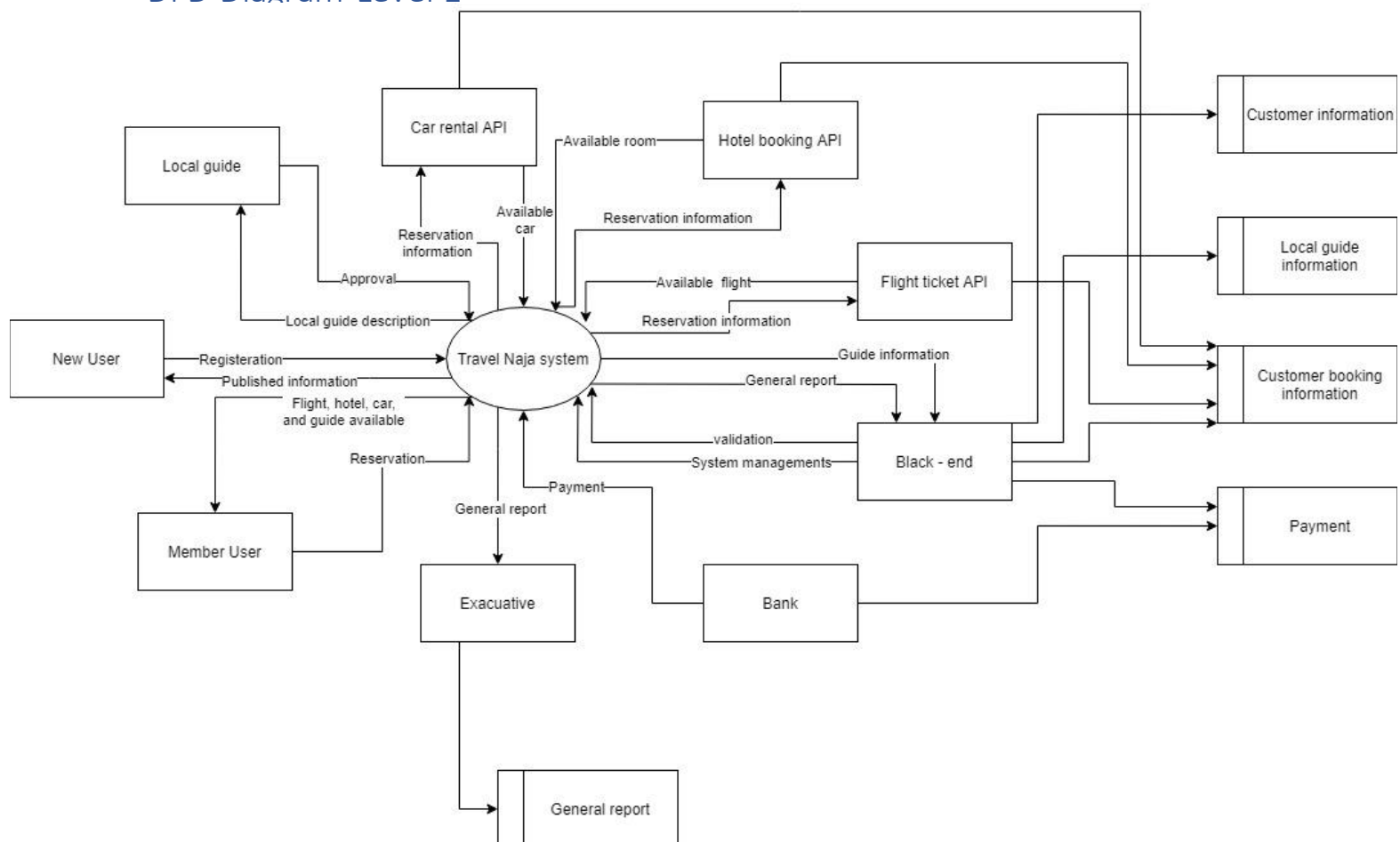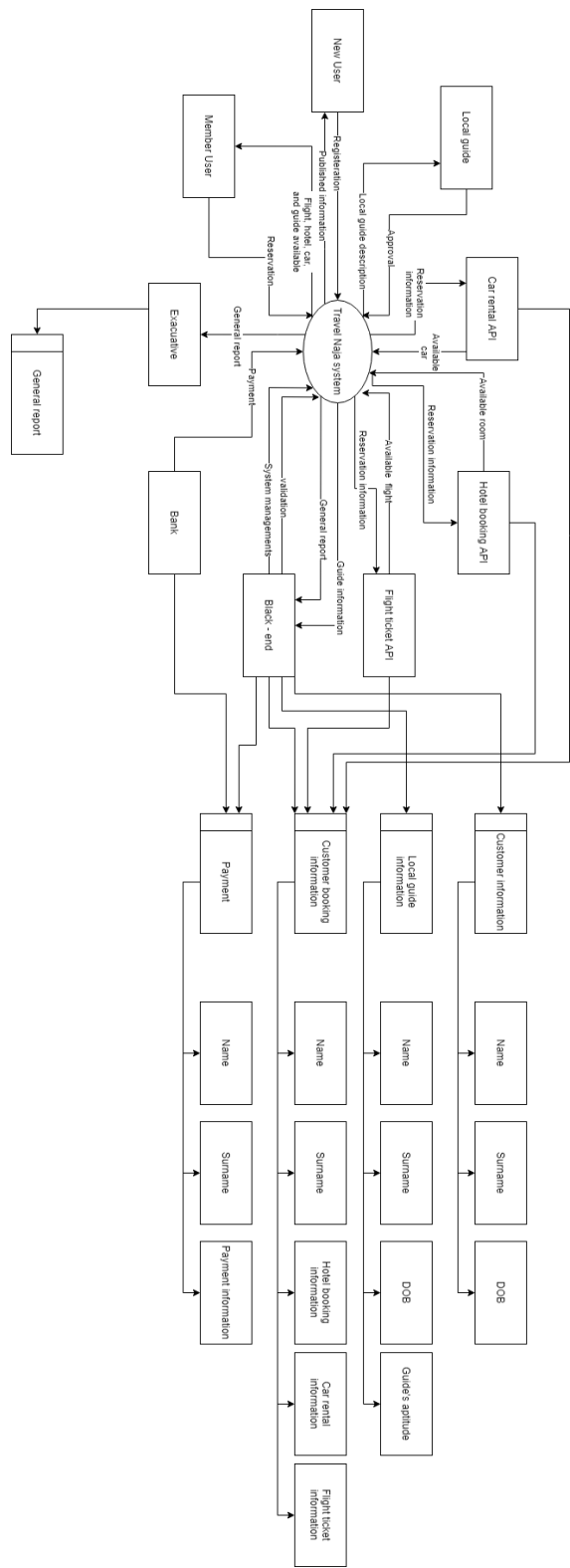
Before edit the Mistake

# New use case diagram

# Functional decomposition diagram
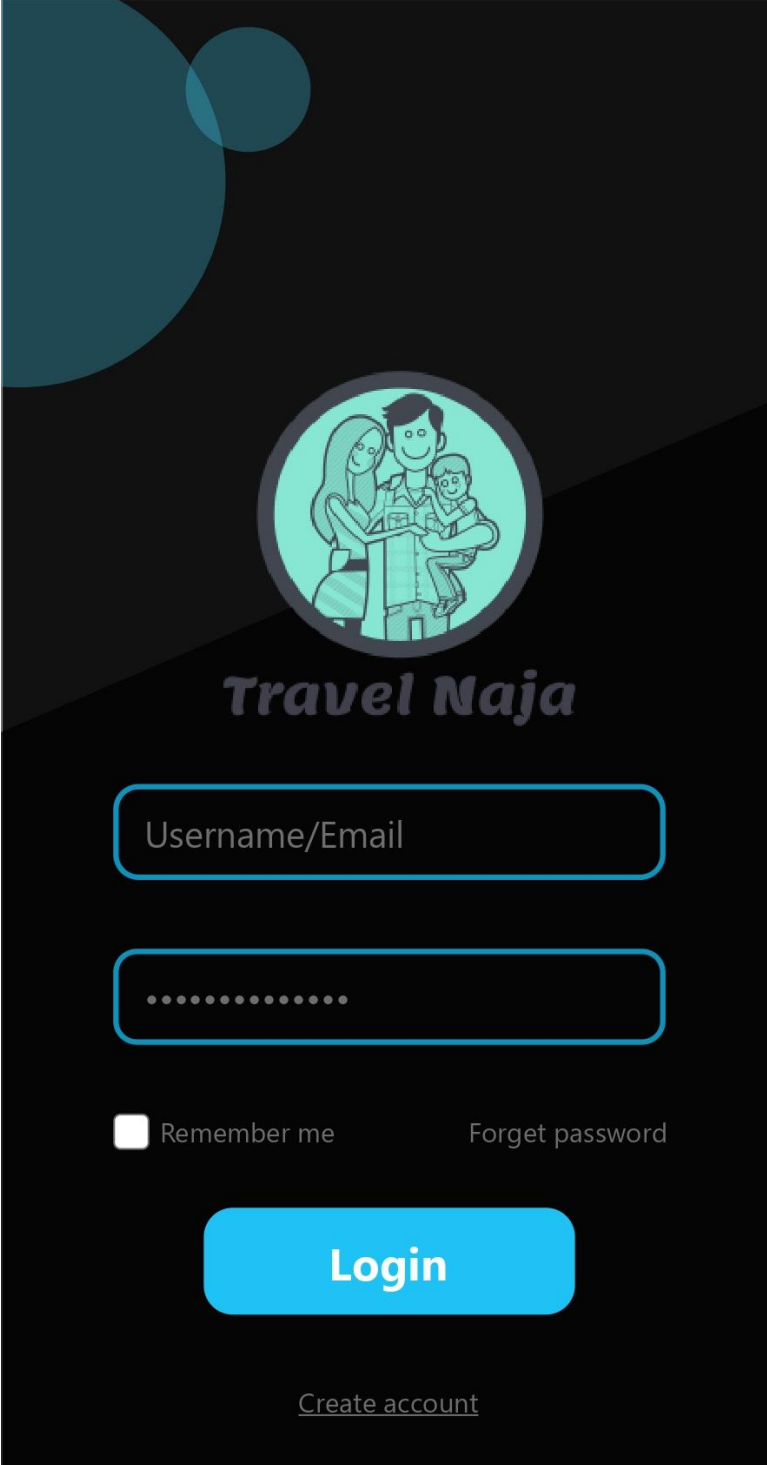


# DFD Diagram Level 1

# DFD Diagram Lv2

A data flow diagram with the central process "Travel Naja system" connected to the following external entities and data stores:

- New User — Registration, Published information
- Member User — Flight, hotel, car, and guide available; Reservation
- Local guide — Local guide description, Approval
- Executive — General report
- General report (data store)
- Bank — Payment
- Car rental API — Reservation information, Available car
- Hotel booking API — Available room, Reservation information
- Flight ticket API — Available flight, Reservation information, Guide information
- Black - end — System managements, validation, General report

Data stores and their attributes:

- Payment — Name, Surname, Payment information
- Customer booking information — Name, Surname, Hotel booking information, Car rental information, Flight ticket information
- Local guide information — Name, Surname, DOB, Guide's aptitude
- Customer information — Name, Surname, DOB

## Mock up prototype



This is a login in page for our travel naja system

- ➢ User can either sign in or joining as a guest
- ➢ If user doesn't have an account. User may press the "Create an account below"
- ➢ User can either save the password or not by checking the Remember me
- ➢ We have a recovery system if user forgot the password.

**TRAVEL NAJA**

# Create account

Username

Email

••••••••••••••

••••••••••••••

By clicking Sign Up, you agree to our Terms, Data Policy.
You may receive SMS notifications
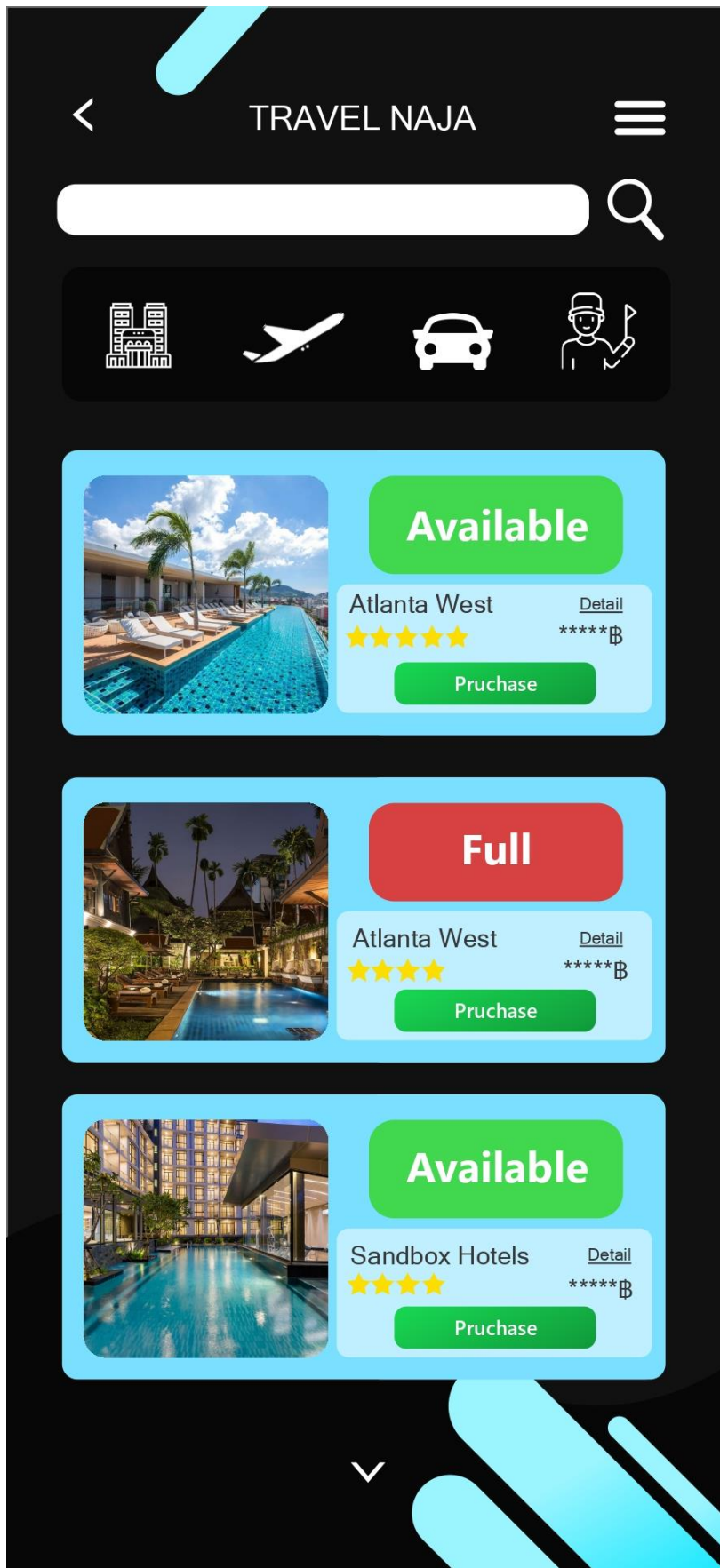
**Create account**

This page is for Create an account

➢ User may fill the necessary information
➢ Clicking the blue button to create an account

This is our home page which include

➢ User can search by typing the search query. He system will bring all the search result that necessary
➢ Hotel booking
➢ Car rental
➢ Flight reservation
➢ Guide tour booking

This is our home page which include

- ➢ User can search by typing the search query. He system will bring all the search result that necessary
- ➢ Hotel booking
- ➢ Car rental
- ➢ Flight reservation
- ➢ Guide tour booking

This is our home page which include

- ➤ User can search by typing the search query. He system will bring all the search result that necessary
- ➤ Hotel booking
- ➤ Car rental
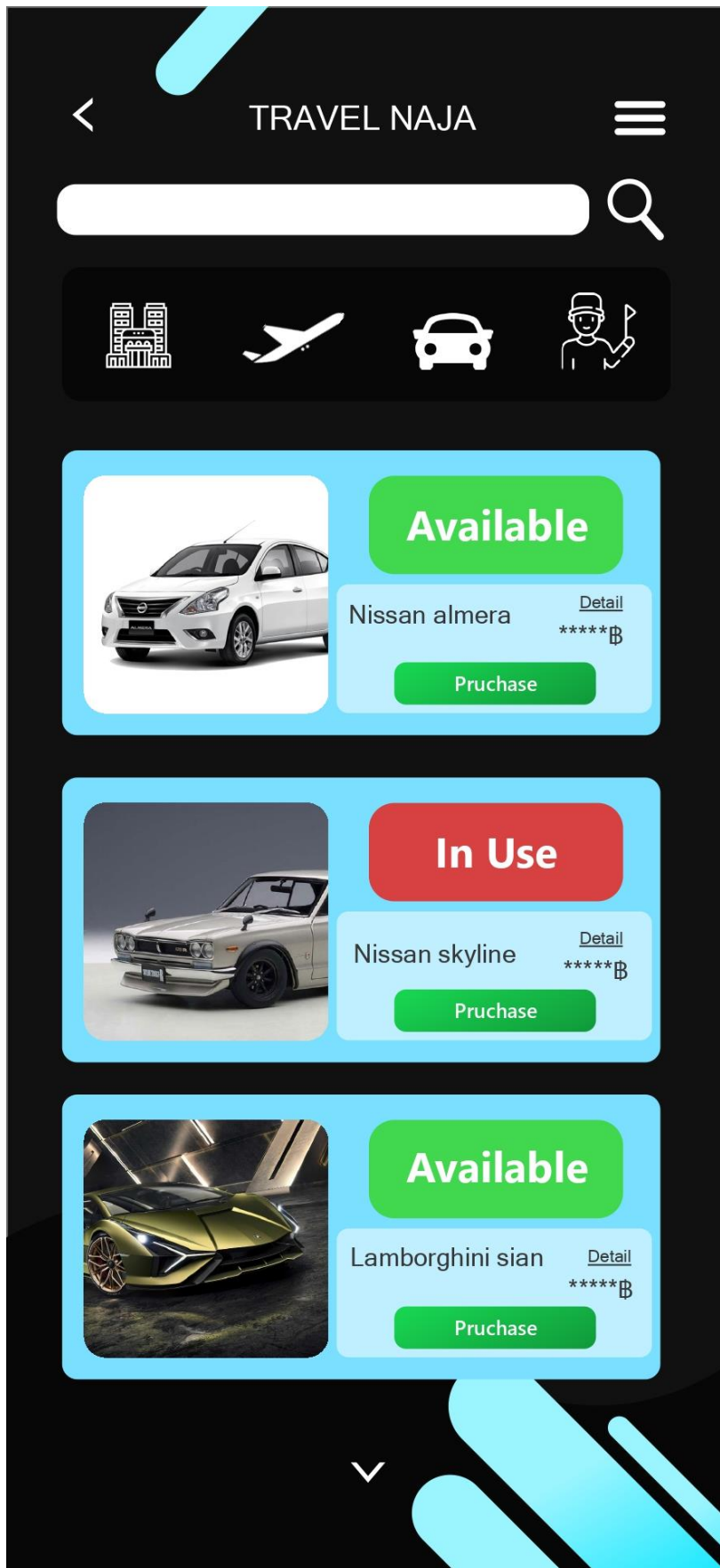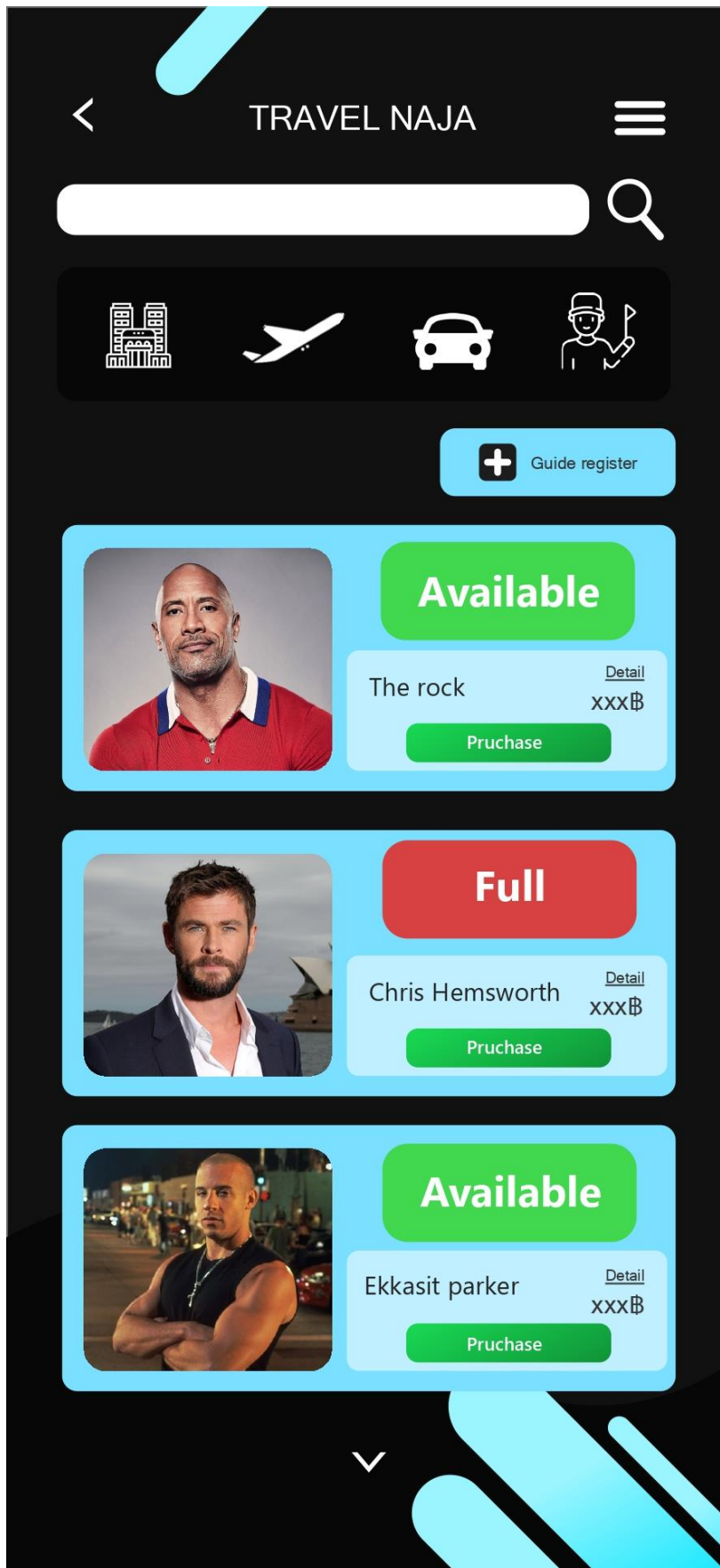- ➤ Flight reservation
- ➤ Guide tour booking

This is our home page which include

- ➢ User can search by typing the search query. He system will bring all the search result that necessary
- ➢ Hotel booking
- ➢ Car rental
- ➢ Flight reservation
- ➢ Guide tour booking

This is a confirmation page Before the payment.

User may check the correctness before they create a payment

## Payment

Name on card

Card No.

Expire

CVV

Bill location

Post

**Confirm & Pay**

TRAVEL NAJA

This is a payment page

User have to fill up all of the necessary information and create the payment

# TRAVEL NAJA

## Guide register

Firstname Surname

Identity card no

Date of birth | Age

Salary

Mobile/Tel

Email

Tour guide aptitude

Present address

**Confirm**

This page is for local guide that want to use our system.

Tour guide need to fill all of the necessary information and wait for the comfirmation.

# Test Case

**Test Case Template**

Test case ID: Login to system          Test Designed by: Tamakorn

Test Priority (Low/Medium/High): Med          Test Designed date: 16-11-2021

Module Name: TravelNaja login screen          Test Executed by: 16-11-2021

Test Tide: Verify login and password.          Test Execution date: 16-11-2021

Description: Test TravelNaja login pages

Pre-conditions: User have corrected name and password

Dependencies:

| Step | Test Steps | Test Data | Expected Result | Actual Result | Status (Pass/Fail) | Notes |
|------|-----------|-----------|-----------------|---------------|--------------------|-------|
| 1 | Navigate the Login Page | test@email.com | User email | User can access the homepage | Pass | |
| 2 | Correct username | 12341234 | User Login | User can access the homepage | | |
| 3 | Correct Password | | User password | User can access the homepage | | |
| 4 | Join as guest | | User can access the homepage | User can access the homepage | Pass | |

Post-conditions: Successfully login to the website/ application

# Test Case Template

Test case ID: Guide Registration

Test Priority (Low/Medium/High): Med

Module Name: Guide Registration screen

Test Tide: Verify tourguide registration.

Description: Test TravelNaja Guide Registration pages

Test Designed by: Tamakorn

Test Designed date: 16-11-2021

Test Executed by: 16-11-2021

Test Execution date: 16-11-2021

Pre-conditions: Tour Guide want to use TravelNaja platform

Dependencies:

| Step | Test Steps | Test Data | Expected Result | Actual Result | Status (Pass/Fail) | Notes |
|------|-----------|-----------|-----------------|---------------|--------------------|-------|
| 1 | Tour guide name and surname | Pasob Ubuttihead | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 2 | Tour guide National ID card | 9 9999 99999 99 9 | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 3 | Tour guide DOB | 18/04/1980 | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 4 | Tour guide salary | 100,000 | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 5 | Tour guide Tel. | 099 999 9999 | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 6 | Tour guide email | test@email.com | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 7 | Tour guide aptitude | Bacon | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 8 | Tour guide address | 100/89 Soi 9 Muang lablae | User can input be able to put the information in the boxes | The web has to save draft for the user | Pass | |
| 9 | Comfirm | - | User click confirm | User click confirm and wait for the email response from our staff | Pass/Fail | Depends on the tour guide ability |

Post-conditions: Tour guide successfully sent the request from and wait for the confirmation form the staff via e mail

# Test Case Template

Test case ID: Payment system

Test Priority (Low/Medium/High): High

Module Name: TravelNaja Payment system

Test Tide: Verify payment by filling the credit card information.

Test Designed by: Tamakorn

Test Designed date: 16-11-2021

Test Executed by: 16-11-2021

Test Execution date:16-11-2021

Description: Test TravelNaja Payment page

Pre-conditions: User have to do the payment before receiving the ticket

Dependencies:

| Step | Test Steps | Test Data | Expected Result | Actual Result | Status (Pass/Fail) | Notes |
|------|-----------|-----------|-----------------|---------------|--------------------|-------|
| 1 | Name on card | Poying autaejai | Input the name | User input the name | Pass | |
| 2 | Card number | 12341234 | Input the card number | User input the card number | Pass | |
| 3 | Expire date | 11/2080 | Input the expiredate | User input the expiredate | Pass | |
| 4 | cvv | 999 | Input the CVV | User input the CVV | Pass | |
| 5 | Bill location | 98/89 Soi 164 Muang Naburi | Input the bill location | User input the bill location | Pass | |
| 6 | Post | 18986 | Input the post code | User input the post code | Pass | |

Post-conditions: Successfully complete the payment and receiving the ticket

# REQUIREMENT TRACEBILITY MATRIX

| REQUIREMENT TRACEBILITY MATRIX | | | | | |
|---|---|---|---|---|---|
| Application: Travel NAJA | | | | | |
| Business Requirement Document (BRD) | | Functional Requirement Document (FRD) | | | Test Case Document |
| Business Requirement ID | Business Requirement/ Business usecase | Functional Requirement ID | Functional Requirement / Use case | Priority | Test Case ID |
| BR_1 | Reservation Module | FR_1 | One way ticket booking | High | TC#001 TC#002 |
| | | FR_2 | Round Way Ticket | | TC#003 TC#004 |
| | | | Hotel/ Car Booking | | TC#005 TC#006 |
| | | | Tour Guide booking | | TC#007 |
| BR_2 | Payment Module | FR_3 | Multicity Ticket booking | High | TC#008 |
| | | FR_4 | By Credit Card | High | TC#009 |