Fpt University

TRƯỜNG ĐẠI HỌC FPT

PARKING LOCATION MANAGEMENT SYSTEM

VERSION 1.1

Software Requirement Specification

– Can Tho, January 2023 –

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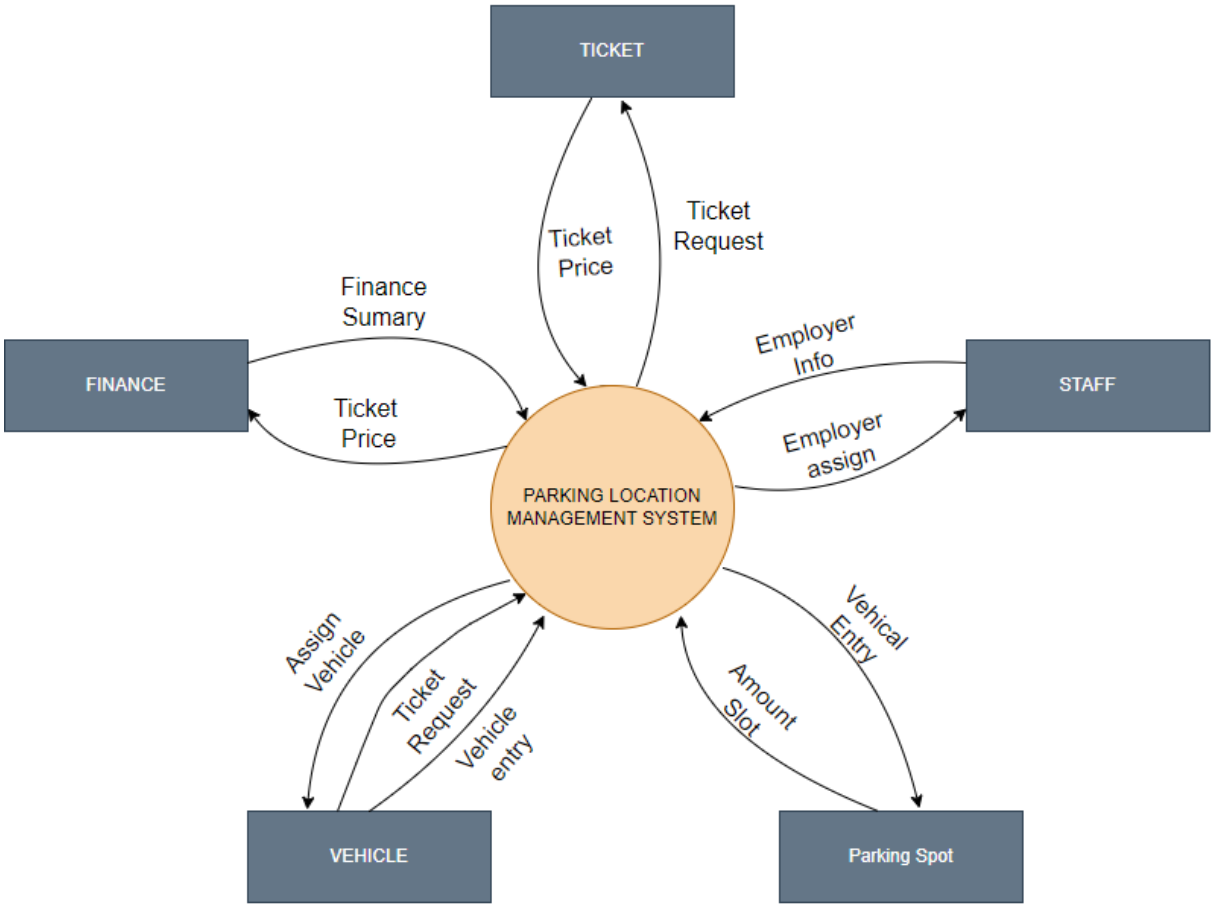
I. Overview

1. Introduction

Currently, vehicles are more and more participating in traffic, the form of vehicle management at traditional parking lots has not met the needs of people because manual management takes a lot of time, not to mention hours. Peak time when the number of cars in and out of the parking lot is very crowded. So, with parking management software, we can solve these problems. The software allows to store and manage information about vehicles and customers more easily, helping us to manage parking more efficiently.



2. System Functions

a. Screen Flow

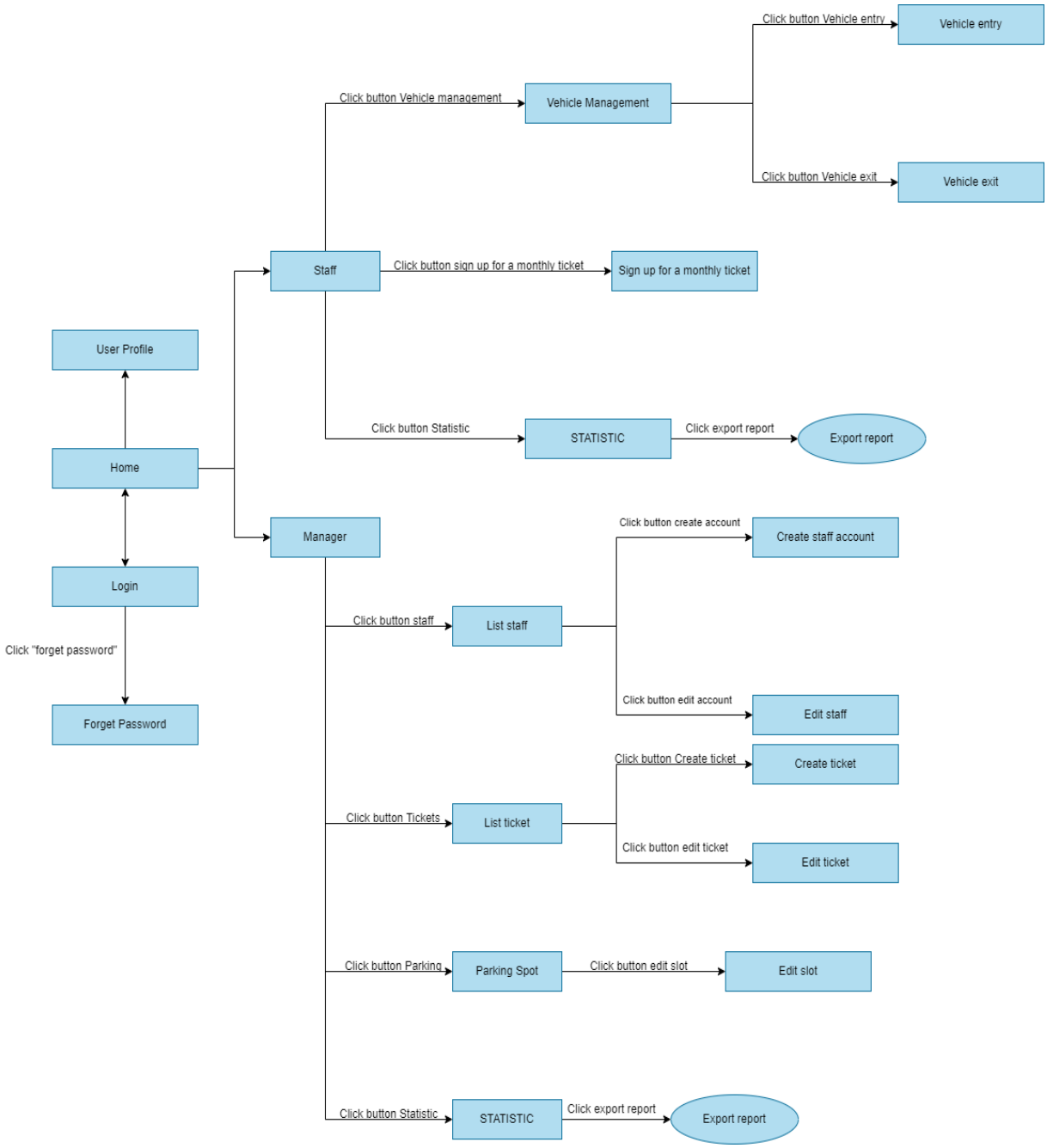


Figure 1. The Screen Flow

b. Screen Details

#	Feature	Screen	Description
1	Login	Login	Allow login to the system
2	Forget Password	Forget Password	Page to help users recover their password
3	Home of staff	Home of staff	Website for parking staff
4	Home of manager	Home of manager	Website for parking management
5	User profile	User profile	Display information of parking staff

4	Vehicle Management	Vehicle entry	Enter vehicle information in the parking lot
5	Vehicle Management	Vehicle exits	Confirm vehicle leaving the parking lot and pay
6	Sign up for a monthly ticket	Sign up ticket	Enter the information of the monthly parking ticket
7	Statistic	Statistic	Export your working day report on revenue, on the number of cars entering and leaving the yard
8	List staff	Show list staff	Showing all staff in parking lot
9	List staff	Create staff account	Allowing manger creates a new account for new staff
10	List staff	Edit account	Manager can change staff information
11	Ticket Management	Show list ticket	This page shows a list of ticket that is created
12	Ticket Management	Create ticket	Allowing manager creates a new random ticket list
13	Ticket Management	Edit ticket	Manager uses to edit monthly information ticket
14	Packing Spot Management	Show Parking Spot	Display a parking spot
15	Packing Spot Management	Edit slot	Using to change the number of car slots or motorcycle slots in the parking spot.
16	Statistic Management	Export report	Showing the sales of a day/week/month Export a report on parking lot revenue

c. User Authorization

#	Screen	Role 1	Role 2
1	Login	X	X
2	Home	X	X
3	User profile	X	X
4	Forget password	X	X
5	Vehicle Management	X	
4	Sign up for a monthly ticket	X	
5	Vehicle entry	X	
6	Vehicle exits	X	
7	Statistic	X	X
8	List staff		X
9	Create staff account		X
10	Edit staff		X
11	List ticket		X
12	Create ticket		X
13	Edit ticket		X
14	Edit slot		X

In which:

- Role 1: Parking lot staff
- Role 2: Parking lot management staff

d. Non-Screen Functions

#	Feature	System Function	Description
1	Calculate the number of cars	Number of cars	To calculate the number of cars entry the parking in a day
2	Create the CSV	CSV Export	To export CSV file
3	Store in the database system	Store	To store data in the database system. The data is used throughout the system.

3. Common Requirements

This project has requirements set to build:

Managers can manage employee information. Has the right to regulate the account password provision for employees.

Vehicles are recorded information when entry. Managers and employees can know that the vehicle is in the parking lot. The permanent staff will check-in check-out of that vehicle according to the ticket types.

The ticket has the time during which the vehicle can use the parking lot. several active tickets is the number of used parking spaces

II. Functional Requirements

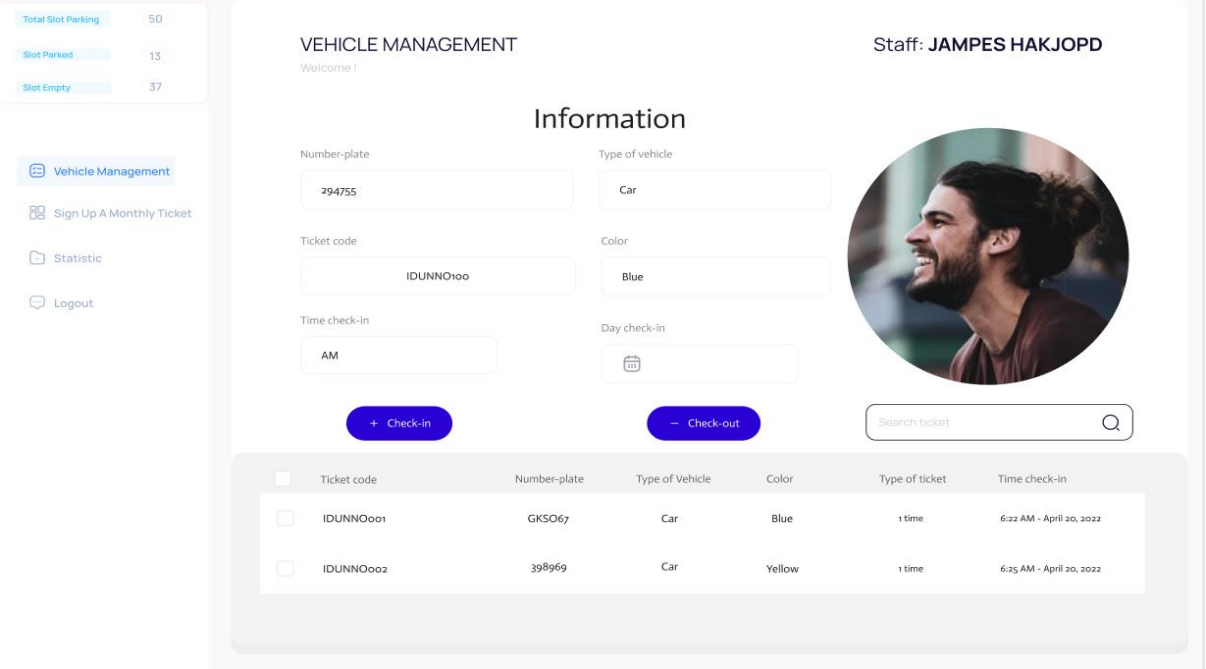
1. Vehicle Management

a. Vehicle entry

- Determine the license plate number and check the vehicle's existence in the system
- Confirm the vehicle has entered the parking lot
- Display vehicle information, including entry date, time of entry, vehicle type and rental price

b. Vehicle exit

- Determine the license plate number and check the vehicle's existence in the system
- Confirm that the vehicle has been paid
- Display vehicle information, including exit date, time of exit, vehicle type and rental price



2. Sign up for a monthly ticket

a. Monthly ticket management Function trigger

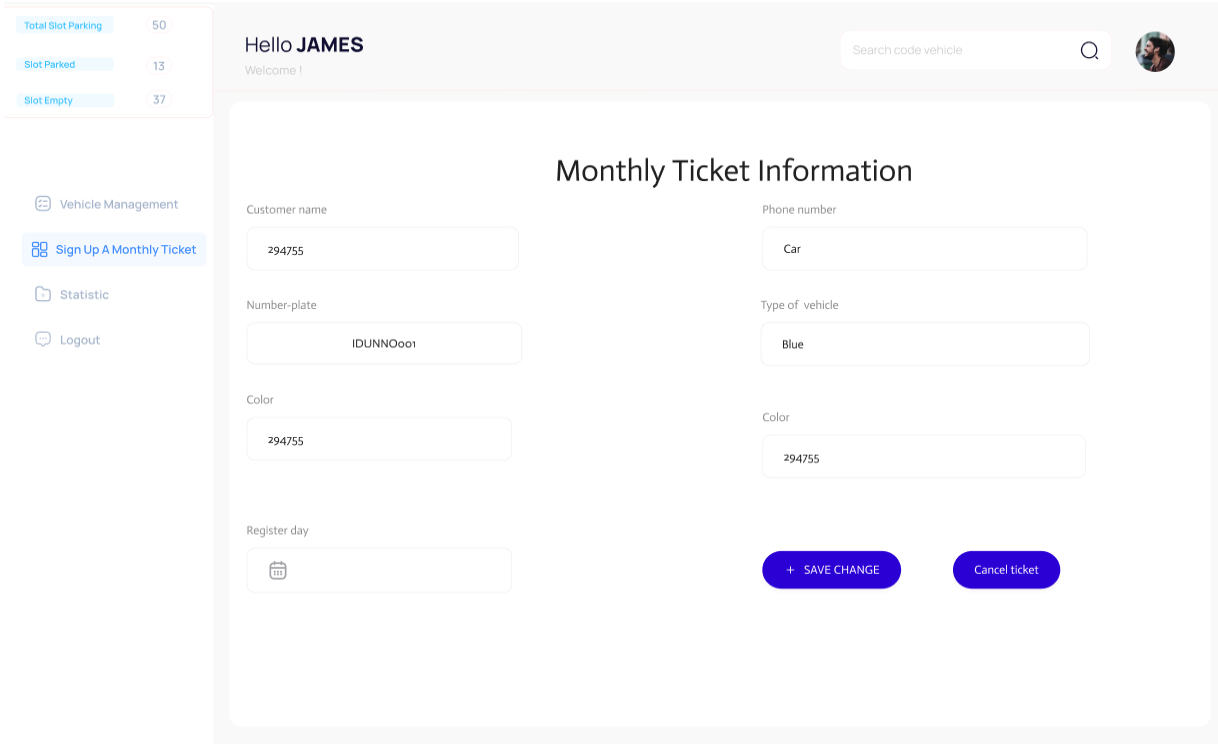
- In the staff page, click on sign up monthly ticket to move into this function

b. Sign up for a monthly ticket page Function description

- The staff can help customer register the monthly ticket if they need.

c. Sign up for a monthly ticket detail

- The staff add new customer information like customer name, phone number, type of vehicle, colour, vehicle code, to register before printing the monthly ticket.
- Registering monthly ticket can help the customer often parking in there saving money.



3. Staff Management

a. Show personal information

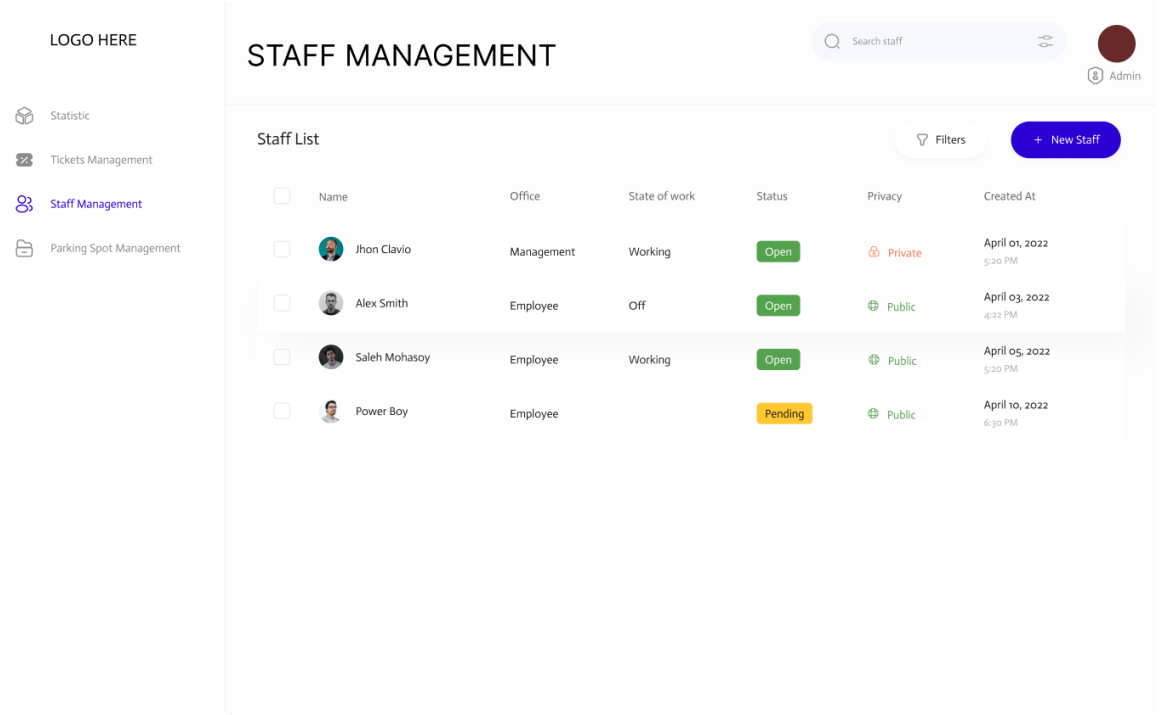
- Displays information including name, date of birth, gender, address, and phone number
- Displays employee code, employee type

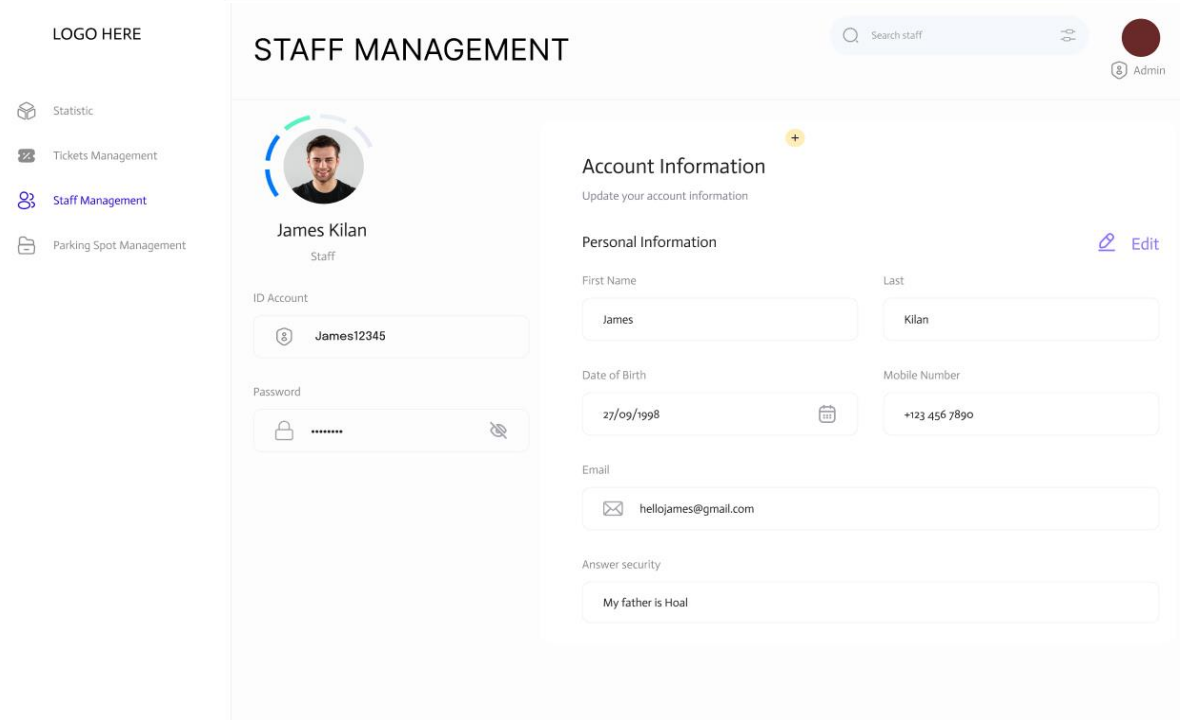
b. Edit personal information

- Edit information including name, date of birth, gender, address, and phone number
- Do not edit employee code and employee type
- Verify password to update information

c. Delete staff account

- Only admin staff can delete regular employees
- Delete all information related to the employee to be deleted





4. Ticket Management

a. Add ticket information

- Display a list of all previously added tickets
- Check the existence of the added ticket
- Ticket information includes car type, ticket type, ticket code

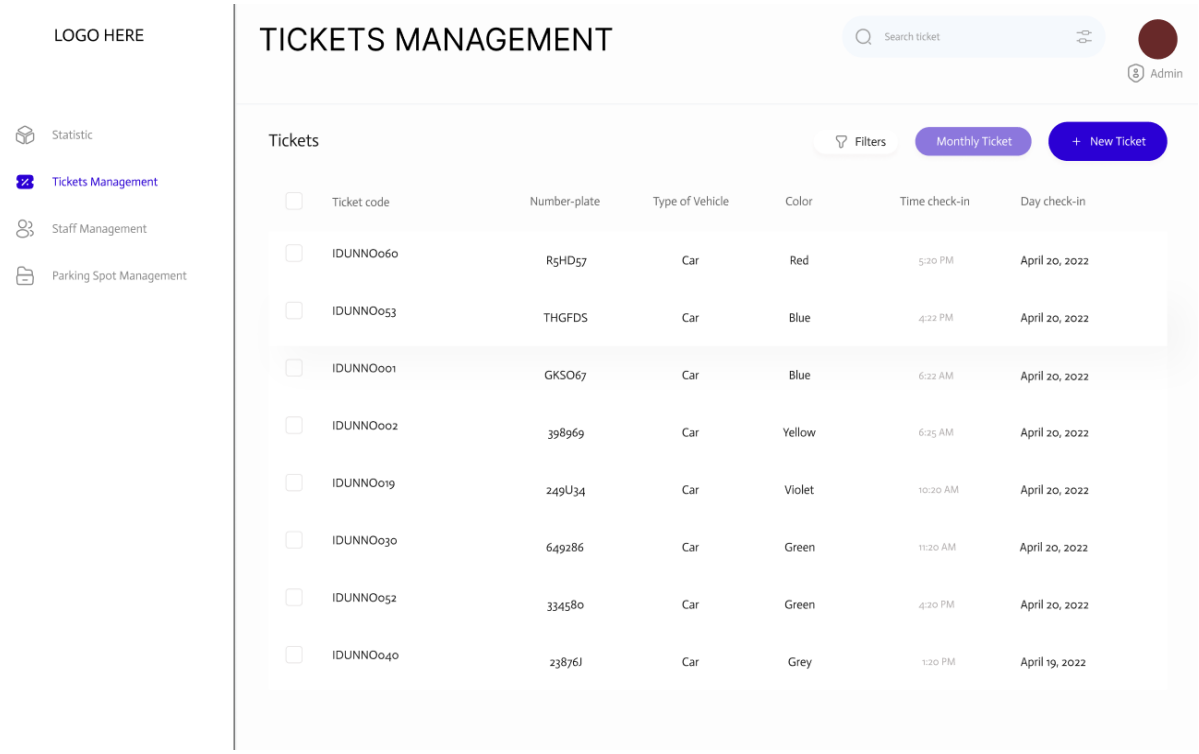
b. Edit ticket information

- Display the list of tickets that exist on the system
- Edit ticket's vehicle type, ticket code
- Check ticket code after editing

- Ticket information includes car type, ticket type, ticket code, license plate

c. Delete ticket information

- Only admin staff can delete ticket



5. Parking Spot Management

a. Show Slot Parking

- Summarize the number of available parking spaces of the areas
- Display the total number of parking spaces in the parking lot, where there are already parked cars, where there are no cars.

b. Add Slot Parking

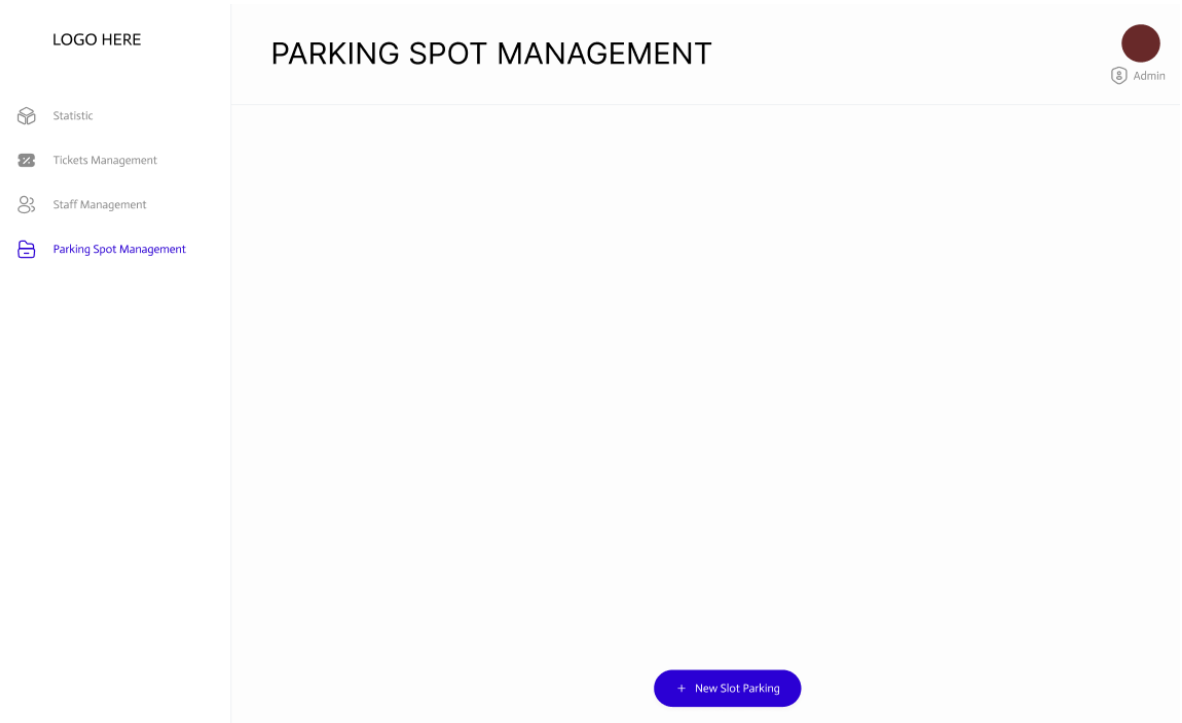
- Add parking space according to the ticket, if it is available, it is allowed, otherwise, a message will be displayed.
- When the Parking Spot is changed, the manager can add again the number of car slots and motorcycle slots

c. Edit Slot Parking

- Edit the parking space when the car enters, the display is already occupied, when the car leaves, the display is empty.

d. Delete Slot Parking

- Delete the parking space when the car scans the card and leaves, showing an empty parking.
- If the Parking Spot is changed the manager can delete a certain slot parking.



6. Statistic

a. Statistic management Function trigger

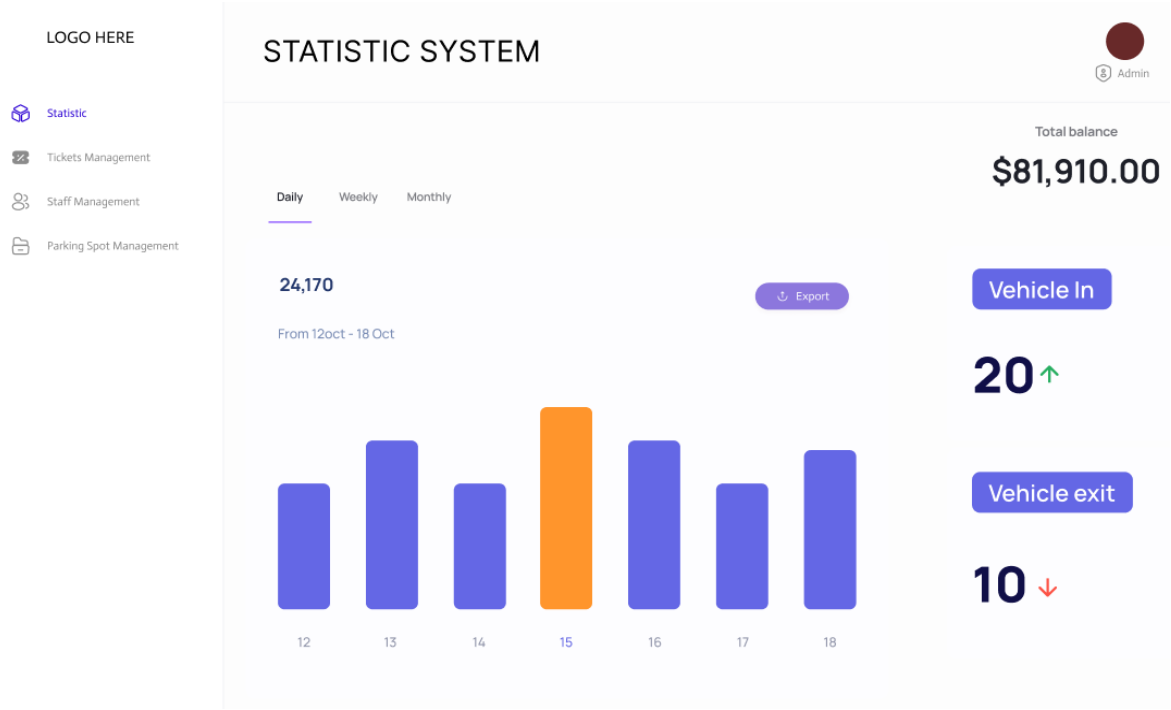
- At the manger page clicks at statistic button to move into the function.

b. Statistic page Function description

- Showing the takings in a day/week/month and export the report.
- Screen layout: mock-up prototype of the screen, sample below is for Statistic Management screen.

c. Statistic detail

- When a vehicle checks out the money is added. At the end of the day staff counts the daily sales.
- When management make a report or check the sales, they can see all of it in a certain day/week/month. It helps the parking spot owner follow the business process


LOGO HERE
STATISTIC SYSTEM
Admin
Statistic
Tickets Management
Staff Management
Parking Spot Management
Total balance
$81,910.00
Daily
Weekly
Monthly
24,170
Export
From 12oct - 18 Oct
Vehicle In
20
Vehicle exit
10
12
13
14
15
16
17
18