CS414.A2

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A Parking System

Brief / Casual

Enter Garage

A driver arrives at the garage to park their car. The driver looks at the garage sign. The garage sign shows whether the garage is full or not and the price of parking. The driver drives to the entry gate and prompts the system. The system gives the driver a ticket. The driver takes the ticket. The system opens the entry gate. The driver enters. The entry gate closes. The driver parks the car.

Alternate Scenarios

The garage is full, the driver leaves. Driver doesn’t like the price or terms, driver leaves.

Exit Garage

The driver drives to the exit gate. The driver shows or enters the ticket. The system tells the driver how much they owe. The driver pays. The exit gate rises. The driver leaves the parking garage. The exit gate lowers.

Manage Garage

The garage administrator requests statistics for garage usage. The system returns the requested statistics.

Assume there is a physical cashier at the exit.

Driver wants to minimize cost and time to park.

Garage administrator wants to maximize revenue (goal).

Change pricing

Determine hourly usage

Create policies for lost tickets, maximum time in garage. Maximum cost.

48 hour parking policy.

Use Case Name:

Scope:

Level:

Primary Actor:

Stakeholders and Interests:

Preconditions:

Success Guarantee:

Main Success Scenario:

Extensions:

Special Requirements:

Technology and Data Variations List:

Frequency of Occurrence:

Open Issues:

Use Case Name:

Enter Garage

Scope:

Parking System

Level:

User goal

Primary Actor:

Driver

Stakeholders and Interests:

Garage Administrators

City Administrators

Payment Authorization Service

Preconditions:

System has power

System is connected to a server.

Parking garage is not full.

Success Guarantee:

Driver is given a ticket.

Entry gate is opened.

Entry is logged.

Entry gate is closed after entry.

Main Success Scenario:

1. Driver arrives at the parking garage.

2. Driver indicates presence to entry kiosk (presses button).

3. Entry kiosk prints ticket.

4. Driver takes the ticket.

5. Entry gate opens.

6. Driver drives through the gate.

7. Entry gate closes.

Extensions:

1a. Driver sees that the parking structure is full, driver leaves.

3a. System detects kiosk is out of paper tickets.

1. Driver presses a “call” button to contact garage administrator

2. Administrator refills tickets

3b. Ticket dispenser is jammed or unoperational.

1. Driver presses a “call” button to contact garage administrator

2a. Administrator fixes the jam or reboots the system.

2b. Administrator marks the time on an informal ticket.

4a. System detects kiosk is out of tickets.

1. System contacts the garage administrator.

Special Requirements:

Call button that will create a contact with the garage administrator.

Phone line and speaker / pa system.

Dispense ticket button.

Technology and Data Variations List:

Frequency of Occurrence:

Intermittent to continuous.

Open Issues:

Use Case Name:

Scope:

Level:

Primary Actor:

Stakeholders and Interests:

Preconditions:

Success Guarantee:

Main Success Scenario:

Extensions:

Special Requirements:

Technology and Data Variations List:

Frequency of Occurrence:

Open Issues:

Use Case Name:

Scope:

Level:

Primary Actor:

Stakeholders and Interests:

Preconditions:

Success Guarantee:

Main Success Scenario:

Extensions:

Special Requirements:

Technology and Data Variations List:

Frequency of Occurrence:

Open Issues:

Use Case Name:

Scope:

Level:

Primary Actor:

Stakeholders and Interests:

Preconditions:

Success Guarantee:

Main Success Scenario:

Extensions:

Special Requirements:

Technology and Data Variations List:

Frequency of Occurrence:

Open Issues: