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| **­** | **MINISTRY OF EDUCATION AND TRAINING** |

**FPT UNIVERSITY**

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| **Report 3** | |
| **Parking Guidance System Solution** | |
| **Group 1** | |
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| **Ext. Supervisor** | N/A |
| **Capstone Project Code** | PGSS |

- Ho Chi Minh City, Jan, 2017

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# Definitions, Acronyms and Abbreviations

|  |  |
| --- | --- |
| **Name** | **Definition** |
| PGS | Parking Guidance System |
| Parking area | An area set aside for parking vehicles, aircraft, etc. |
| Parking lot | A place inside parking area that provide space for one vehicle |
| IoT | Internet of Things |
| CCU | Central Control Unit |

Table : Definitions, Acronyms and Abbreviations

# C. Software – Hardware Requirement Specification

## User Requirement Specification

## System Requirement Specification

### External Interface Requirement

#### User Interface

#### Hardware Interface

##### Block Diagram – Overview

##### Block Diagram Details

##### Arduino Uno

##### Triple – Axis Digital Compass HMC5883L

##### RF module nRF24L01+

#### Software Interface

#### Communication Protocol

### System Overview Use Case

E:\Downloads\CapstoneUseCases.png

**Figure 1: Overview use case diagram**

### List of Use Case

#### Manager Use Case

E:\Downloads\ManagerUseCase.png

**Figure 2: Manager use case diagram**

**Use case specifications**

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case-1 specification** | | | |
| **Use-case no.** | PGSS01 | **Use-case version** | 1.0 |
| **Use-case name** | Config System | | |
| **Author** | Bui Phu Hiep | | |
| **Date** | 13/02/17 | **Priority** | High |
| **Actor:**   * Manager   **Summary:**   * This use case allow user to change the configuration of their system.   **Goal:**   * Manager can change the information of car park which show to the end user.   **Triggers:**   * User click on “Setting” button.   **Preconditions:**   * Mobile application is already launch. * Manager has been logged in   **Post Conditions:**   * **On Success:** New config is apply and save to server * **On Failure:** Show error message   **Main Success Screnario:**   |  |  |  | | --- | --- | --- | | **No.** | **Actor Action** | **System Response** | | 1 | User click on “Setting” button | Application navigate to “Setting” menu | | 2 | User select option in the Menu  Change by click toggle or change value in the text box  Select “Submit” button | Change the value and save to server |   **Alternative Scenario:**   * N/A   **Exceptions:**   * N/A   **Business Rules:**   * N/A | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Use Case-1 specification** | | | |
| **Use-case no.** | PGSS02 | **Use-case version** | 1.0 |
| **Use-case name** | Manage Car Park | | |
| **Author** | Bui Phu Hiep | | |
| **Date** | 13/02/17 | **Priority** | High |
| **Actor:**   * Manager   **Summary:**   * This use case allow user to change their car park info.   **Goal:**   * Manager can change the information of car park which show to the end user.   **Triggers:**   * User select their car park. * Click “Edit”   **Preconditions:**   * Mobile application is already launch. * Manager has been logged in   **Post Conditions:**   * **On Success:** New config is apply and save to server * **On Failure:** Show error message   **Main Success Screnario:**   |  |  |  | | --- | --- | --- | | **No.** | **Actor Action** | **System Response** | | 1 | User click on “Setting” button | Application navigate to “Setting” menu | | 2 | User select option in the Menu  Change by click toggle or change value in the text box  Select “Submit” button | Change the value and save to server |   **Alternative Scenario:**   * N/A   **Exceptions:**   * N/A   **Business Rules:**   * N/A | | | |

## Software System Attribute

### Usability

### Reliability

### Availability

### Security

### Maintainability

### Portability

### Performance

## Conceptual Diagram