Use Cases

for

i5EN5E

Version 1.0 approved

Prepared by Ng Jing Nee

5EN5E

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Revision History

Name	Date	Reason For Changes	Version
Ng Jing Nee	15 Jan 2016	Refinement of use case descriptions	1.1
Ng Jing Nee	02 Apr 2016	Refinement of use case descriptions	1.2

Guidance for Use Case Template

Document each use case using the template shown in the Appendix. This section provides a description of each section in the use case template.

1. Use Case Identification

1.1. Use Case ID

Give each use case a unique numeric identifier, in hierarchical form: X.Y. Related use cases can be grouped in the hierarchy. Functional requirements can be traced back to a labeled use case.

1.2. Use Case Name

State a concise, results-oriented name for the use case. These reflect the tasks the user needs to be able to accomplish using the system. Include an action verb and a noun. Some examples:

- View part number information.
- Manually mark hypertext source and establish link to target.
- Place an order for a CD with the updated software version.

1.3. Use Case History

1.3.1 Created By

Supply the name of the person who initially documented this use case.

1.3.2 Date Created

Enter the date on which the use case was initially documented.

1.3.3 Last Updated By

Supply the name of the person who performed the most recent update to the use case description.

1.3.4 Date Last Updated

Enter the date on which the use case was most recently updated.

2. Use Case Definition

2.1. Actor

An actor is a person or other entity external to the software system being specified who interacts with the system and performs use cases to accomplish tasks. Different actors often correspond to different user classes, or roles, identified from the customer community that will use the product. Name the actor(s) that will be performing this use case.

2.2. Description

Provide a brief description of the reason for and outcome of this use case, or a high-level description of the sequence of actions and the outcome of executing the use case.

2.3. Preconditions

List any activities that must take place, or any conditions that must be true, before the use case can be started. Number each precondition. Examples:

1. User's identity has been authenticated.
2. User's computer has sufficient free memory available to launch task.

2.4. Postconditions

Describe the state of the system at the conclusion of the use case execution. Number each postcondition. Examples:

1. Document contains only valid SGML tags.
2. Price of item in database has been updated with new value.

2.5. Priority

Indicate the relative priority of implementing the functionality required to allow this use case to be executed. The priority scheme used must be the same as that used in the software requirements specification.

2.6. Frequency of Use

Estimate the number of times this use case will be performed by the actors per some appropriate unit of time.

2.7. Flow of Events

Provide a detailed description of the user actions and system responses that will take place during execution of the use case under normal, expected conditions. This dialog sequence will ultimately lead to accomplishing the goal stated in the use case name and description. This description may be written as an answer to the hypothetical question, "How do I <accomplish the task stated in the use case name>?" This is best done as a numbered list of actions performed by the actor, alternating with responses provided by the system.

2.8. Alternative Flows

Document other, legitimate usage scenarios that can take place within this use case separately in this section. State the alternative course, and describe any differences in the sequence of steps that take place. Number each alternative course using the Use Case ID as a prefix, followed by "AC" to indicate "Alternative Course". Example: X.Y.AC.1.

2.9. Exceptions

Describe any anticipated error conditions that could occur during execution of the use case, and define how the system is to respond to those conditions. Also, describe how the system is to respond if the use case execution fails for some unanticipated reason. Number each exception using the Use Case ID as a prefix, followed by "EX" to indicate "Exception". Example: X.Y.EX.1.

2.10. Includes

List any other use cases that are included ("called") by this use case. Common functionality that appears in multiple use cases can be split out into a separate use case that is included by the ones that need that common functionality.

2.11. Special Requirements

Identify any additional requirements, such as nonfunctional requirements, for the use case that may need to be addressed during design or implementation. These may include performance requirements or other quality attributes.

2.12. Assumptions

List any assumptions that were made in the analysis that led to accepting this use case into the product description and writing the use case description.

2.13. Notes and Issues

List any additional comments about this use case or any remaining open issues or TBDs (To Be Determineds) that must be resolved. Identify who will resolve each issue, the due date, and what the resolution ultimately is.

Use Case Template

Use Case ID:	PlanRoute1.1		
Use Case Name:	Plan Route		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	Driver
Description:	A driver is able to plan a route from his desired starting point to his desired destination.
Preconditions:	Driver must have selected START.
Postconditions:	None if driver exits. Routes are displayed for driver to select/sort if exit was not chosen.
Priority:	Essential
Frequency of Use:	Frequent
Flow of Events:	1. This use case begins when the user selects START and inputs his vehicle type. 2. The system displays the current location of the user. 3. The user enters his start and end destination and selects SEARCH. The default start location is the current location. 4. The system displays the available routes to the user. 5. User browses for a desired route. User then selects GO. 6. If activity selected is BACK, the use case ends.
Alternative Flows:	
Exceptions:	PlanRouteEX1.1 1. User does not input vehicle type and clicks OK. The system prompts the user to select and does not allow the user to move forward until the vehicle type is selected. 2. User inputs an invalid or unknown address into the search or destination bar. The system alerts the user that the address cannot be found and suggests alternative addresses.
Includes:	1. Store route history 2. View current location
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.2		
Use Case Name:	View ERP rates		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	Driver
Description:	A driver must be able to view ERP rates.
Preconditions:	Driver must have selected View ERP Rates from the menu bar.
Postconditions:	None
Priority:	Low
Frequency of Use:	Occasional
Flow of Events:	1. This use case begins when the user selects View ERP Rates in the side menu bar. 2. The system prompts the user to select the ZONE. 3. User selects the desired zone and selects VIEW ERP RATES. 4. The system displays the desired ERP rates for the user. 5. If the activity selected is BACK, the user is returned to the previous page. The use case ends.
Alternative Flows:	
Exceptions:	PlanRouteEX1.1 1. User does not select which zone to view and clicks Get ERP Rates. The system prompts the user to select a zone and does not allow user to move forward until the zone is selected.
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.3		
Use Case Name:	Make reports		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	Driver
Description:	A driver is able to report various traffic conditions.
Preconditions:	Driver must have clicked the Report icon.
Postconditions:	Return to previous page. Alerts are sent to other drivers using the application. No alert if driver exits does not confirm report.
Priority:	Low
Frequency of Use:	Occasional
Flow of Events:	1. This use case begins when the user selects the Report icon. 2. The system prompts the user to select TRAFFIC CONDITION, TRAFFIC POLICE, or TRAFFIC CAMERA. 3. If the activity selected is TRAFFIC CONDITION, the system prompts the user to select TRAFFIC JAM, ACCIDENT, or OBSTRUCTIONS. 4. If the activity selected is TRAFFIC POLICE, the system prompts the user to confirm report.. 5. If the activity selected is TRAFFIC CAMERA, the system prompts the user to confirm.. 6. If the activity selected is CONFIRM, the system updates and returns to previous page. The use case ends. 7. If the activity selected is CANCEL, the system exits to the previous page and the use case ends.
Alternative Flows:	
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.4		
Use Case Name:	Receive alerts		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	System
Description:	A driver is able to receive alerts on traffic conditions. This alerting is done by the system.
Preconditions:	Driver must be in the navigation screen and following the planned route.
Postconditions:	None
Priority:	Medium
Frequency of Use:	Occasional
Flow of Events:	1. This use case begins when the user is already following the drive directions in the navigation screen. 2. The system checks the temporary database and match it with the user's current location to see if there are alerts. 3. If a report is made in the vicinity of the user's location, the system sends an alert to the user. 4. The user can dismiss or ignore the alert. 5. If the activity selected is dismiss, the alert is removed from the screen. 6. If the user chooses to ignore the alert, nothing happens. 7. This use case ends when the user exits the navigation screen.
Alternative Flows:	
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.5		
Use Case Name:	View help		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	Driver
Description:	A driver must be able to view help.
Preconditions:	Driver must have selected HELP.
Postconditions:	None
Priority:	Low
Frequency of Use:	Rare
Flow of Events:	1. This use case begins when the user selects HELP in the home menu. 2. The system prompts the user to select ICON DESCRIPTION or TUTORIAL. 3. User selects the desired help section. 4. If the activity selected is ICON DESCRIPTION, the system displays the icon description for the user. 5. If the activity selected is TUTORIAL, the system displays the tutorial video for the user. 6. If the activity selected is BACK, the user is returned to the previous page and the use case ends.
Alternative Flows:	
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.6		
Use Case Name:	Configure settings		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	Driver
Description:	A driver must be able to configure settings.
Preconditions:	Driver must have selected SETTINGS.
Postconditions:	None
Priority:	Low
Frequency of Use:	Rare
Flow of Events:	1. This use case begins when the user selects SETTINGS. 2. The system prompts the user to adjust audio or languages. 3. User selects the desired activity. 4. If the activity selected is AUDIO, the system updates to the desired audio setting and saves the setting update to the device's local storage. 5. If the activity selected is LANGUAGE, the system updates to the desired language setting and saves the setting update to the device's local storage. 6. If the activity selected is BACK, the user is returned to the previous page and the use case ends.
Alternative Flows:	
Exceptions:	
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.7		
Use Case Name:	Store route history		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	System
Description:	Route history must be automatically stored when a driver selects to start a route.
Preconditions:	Driver must have selected GO after choosing his desired route.
Postconditions:	Route is stored into driver's last 5 selected routes.
Priority:	Essential
Frequency of Use:	Frequent
Flow of Events:	1. This use case begins when the user selects the GO button after selecting his desired route for the first time. 2. The system retrieves the route's information and stores it into the user's local device storage. 3. The system deletes the earliest selected route in the history if there are already 5 routes stored. 4. If the user selects the BACK button after selecting GO, the system will still record the untaken route. 5. This use case ends when the user ceases to use the system or has no memory left in his device.
Alternative Flows:	
Exceptions:	PlanRouteEX1.1 1. If the user has no memory left in his device, the system will prompt him to expand his memory space. The system will not store any route history if the storage continues to be insufficient.
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	

Use Case Template

Use Case ID:	PlanRoute1.8		
Use Case Name:	View current location		
Created By:	Ng Jing Nee	Last Updated By:	Ng Jing Nee
Date Created:	26 Jan 2016	Date Last Updated:	02 Apr 2016

Actor:	Driver
Description:	A driver must be able to view his current location constantly.
Preconditions:	Driver must be in the navigation screen.
Postconditions:	None
Priority:	Essential
Frequency of Use:	Frequent
Flow of Events:	1. This use case begins when the user enters the navigation screen. 2. The system retrieves the user's current location via the GPS of the user's phone and the Gothere Map API. 3. The system places a marker to display the user's current location. 4. If the user clicks on the marker, the system displays more information about the location. 5. If the activity selected is BACK, this use case ends.
Alternative Flows:	
Exceptions:	PlanRouteEX1.1 1. If the GPS is not switched on, the system will prompt the user to switch it on. The system will continue in offline mode if GPS is not switched on.
Includes:	
Special Requirements:	
Assumptions:	
Notes and Issues:	