HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

School of Information and Communications Technology

ITSS Software Development Report

**EcoBikeRental**

Subject: Software Development

Instructor: Prof. Trinh Tuan Dat

Student: Hoang Tuan Anh Van - 20170224

*Hanoi, December 2020*

1. Assigned Use Case

|  |  |  |  |
| --- | --- | --- | --- |
| UC Code | UC004 | Use case name | User Search Docking Stations |
| Actor | User | | |
| Description | The “user search docking stations” use case is initiated when user press the log in as user button in the log in page. Subsequently, a new page with title “Eco Bike Rental for USER” appears containing 3 text fields (ID, Name, Address) for user to enter search keywords. User then can enter some keywords in those fields. System then display a list of station matched the input keywords when user press Search button. | | |
| Precondition | User successful Login | | |
| Main flow of event (success) | |  |  |  | | --- | --- | --- | | # | Doer | Action | | 1 | User | Enter search keywords in search pane search fields | | 2 | User | Press Search Button | | 3 | Software | Get search parameters | | 4 | Software | Search for stations that match the keyword | | 5 | Software | Display list of matched station | | | |
| Alternative flow of event | |  |  |  | | --- | --- | --- | | # | Doer | Action | |  | User | Close Software at any time | | 5a | Software | Display nothing in station list pane if there is no matching station | | | |
| Post-condition | None | | |

\* Input requirement:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Data field** | **Description** | **Required?** | **Valid condition** | **Example** |
| 1 | ID | Keyword for ID of station | No | Characters and digits | 12Bc1 |
| 2 | Name | Keyword for name of station | No | Characters and digits | Station1 |
| 3 | Address | Keyword for address of station | No | Characters and digits | Ta Quang Buu |

1. Diagrams
   1. Sequence Diagram for Analysis ClassDiagram

      Description automatically generated
   2. Analysis Classes

Diagram

Description automatically generated

* 1. Package Diagram

Diagram

Description automatically generated

* 1. Sequence Diagram for Design Class

Diagram

Description automatically generated

* 1. Design Classes

Diagram

Description automatically generated

1. Unit Testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case Name:** User Search Station | | | **Technique applied:** Black Box | | |
| **Description:** Test the search station function of user | | | | | |
| **Pre-conditions:** Successfully log in as user | | | | | |
|  | | | | | |
| **Step** | **Action** | **Expected System Response** | | **Pass/Fails** | **Comment** |
| 1 | Enter ‘ds1’ in ID Field | ‘ds1’ displayed in ID field | | pass |  |
| 2 | Press Search | Information of station ds1 displayed in result pane | | Pass |  |
| 3 | Enter ‘@@’ in ID field and press Search | Nothing is displayed in result pane | | Pass |  |
| 4 | Delete ‘@@’ and press Search | All Station displayed in result pane | | Pass |  |
| 5 | Enter ‘3’ in Name Field | ‘3’ displayed in Name field | | Pass |  |
| 6 | Press Search | Information of station ‘Docking Station 3’ displayed in result pane | | Pass |  |
| 7 | Delete ‘3’ in Name field Enter ‘Ta Quang Buu’ in Address Field | ‘Ta Quang Buu’ displayed in Address field | | Pass |  |
| 8 | Press Search | Information of station located in ‘1 Ta Quang Buu’ displayed in result pane | | Pass |  |
| 9 | Enter ‘ds2’ in ID field Enter ‘Docking Station’ in Name field Enter ‘Ta Quang Buu’ in Address field  Press Search | Information of station with ID ‘ds2’, name ‘Docking Station 2’ and located in ‘1 Ta Quang Buu’ displayed in result pane | | Pass |  |
| 10 | Enter ‘ds1’ in ID field Enter ‘Docking Station’ in Name field Enter ‘Ta Quang Buu’ in Address field  Press Search | Nothing is displayed in result pane | | Pass |  |