**Use case “Return Bike”**

1. **Use case code:**

UC001

1. **Brief Description:**

This use case describes the interaction between Customer and ECOBIKERENTAL Software when customer wishes to return a bike

1. **Actors**
   1. **Customer**
2. **Preconditions**

Preconditions of this use case is that customer can return a bike if only if he/she is renting a bike.

1. **Basic Flow of Events**

Step 1. The customer send request to return bike

Step 2. The ECOBIKERENTAL software prompt a form for entering barcode of bike

Step 3. The customer enters barcode of return bike

Step 4. The ECOBIKERENTAL software check if barcode had been entered is valid

Step 5. The ECOBIKERENTAL software notifies that bike’s barcode is a valid barcode

Step 6. The customer submits request to return bike

Step 7. The ECOBIKERENTAL software checks if that bike is valid for the customer to return

Step 8. The ECOBIKERENTAL software calculates amount of money corresponding to the rental period with deposit

Step 9. The ECOBIKERENTAL software calls use case “Deduct money from card”

Step 10. The ECOBIKERENTAL software notifies that returning bike is successful

1. **Alternative flows**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Location** | **Condition** | **Action** | **Resume location** |
| **1** | At Step 5 | If the barcode had been entered is not a valid bike code | The ECOBIKERENTAL software notifies that barcode is invalid and asks the customer to enter other barcode. | Resumes at Step 2 |
| **2** | At Step 8 | If that bike is not rented by the customer who sent the request returning bike | The ECOBIKERENTAL software notifies that bike is not belong to the customer and asks the customer to enter other barcode. | Resumes at Step 2 |
| **3** | At Step 8 | If that bike had not been rented yet | The ECOBIKERENTAL software notifies that bike is still free, invalid for returning right now and asks the customer to enter other barcode. | Resumes at Step 2 |

1. **Input data**

*Table1 - Input data of returning a bike*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Data fields** | **Description** | **Mandatory** | **Valid condition** | **Example** |
| 1 | Renter Name |  | Yes |  | Tran Thi Hang |
| 2 | Phone number |  |  |  | 0396652104 |
| 3 | Bike barcode | Each bike has a code to distinguish | Yes | A string contains numbers and letters only | XD12134 |

1. **Output data**

*Table2 - Output data of returning a bike*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Data fields** | **Description** | **Display format** | **Example** |
| 1 | Type | Type of rented bike.  Can be 1 of 3 types:   * Standard bike * Standard e-bike * Twin bike |  | Twin bike |
| 2 | Bike barcode | Each bike has a code to distinguish | A string contains numbers and letters only | XD12134 |
| 3 | Start | Time that customer starts renting that bike | hh:mm:ss, dd/mm/yy | 09:00:00, 12/9/2020 |
| 4 | End | Time that customer returns bike | hh:mm:ss, dd/mm/yy | 10:10:00, 12/9/2020 |
| 5 | Rental Period | Amount of time that customer rented that bike | X days, y hours, z minutes | 70 minutes |
| 5 | Deposit | Deposit amount that the customer paid when renting that bike | * Comma for thousands separator * Positive integer * Right alignment | 550,000 |
| 6 | Subtotal | Amount of money for that rental period | 19,000 |
| 8 | Total | Amount of money that the customer has to pay after subtracting deposit  (negative means the customer will receive money back) | - 531,000 |
| 9 | Currency |  |  | VND |
| 10 | Name |  |  | Tran Thi Hang |
| 11 | Phone number |  |  | 0396652104 |

1. **Postconditions**