

Use case “Return Bike”

1. Use case code:

UC001

2. Brief Description:

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

3. Actors

3.1. Customer

4. Preconditions

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

5. 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

6. 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	Resumes at Step 2

			asks the customer to enter other barcode.	
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

7. 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

8. 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	<ul style="list-style-type: none"> - 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

9. Postconditions