Use Case “Return Bike”

1. Brief Description

This use case describes the interation between users and the software when returning a bike after renting it.

2. Actors

2.1 Customer

2.2 Software

2.3 Interbank

3. Preconditions

After customer scan a barcode to rent bike or return bike

4. Basic Flow of Events

Step 1. Customer opens Return Bike function

Step 2. Software checks for empty docks

Step 3. Software displays nearest empty dock together with all empty docks marked on map

Step 4. Customer chooses an empty dock

Step 5. Software calculates the deposit, rental fees, and refunds (if any)

Step 6. Software displays the invoice

Step 7. Software calls the “make transaction” use case

5. Alternative flows

Table 1. Alternative flows of events for UC “Return bike”

No	Location	Condition	Action	Resume location
1	At step 3	If the software cannot find any empty docks	▪ The software asks user ti wait until there is a vacant dock	At step 2
2	At step 6	If customer rents 24-hour pass	▪ Software checks for the rented period	At step 5

			▪ Software refunds if elapsed time is less than 24 hours or deducts if it exceeds	

6. Activity diagrams

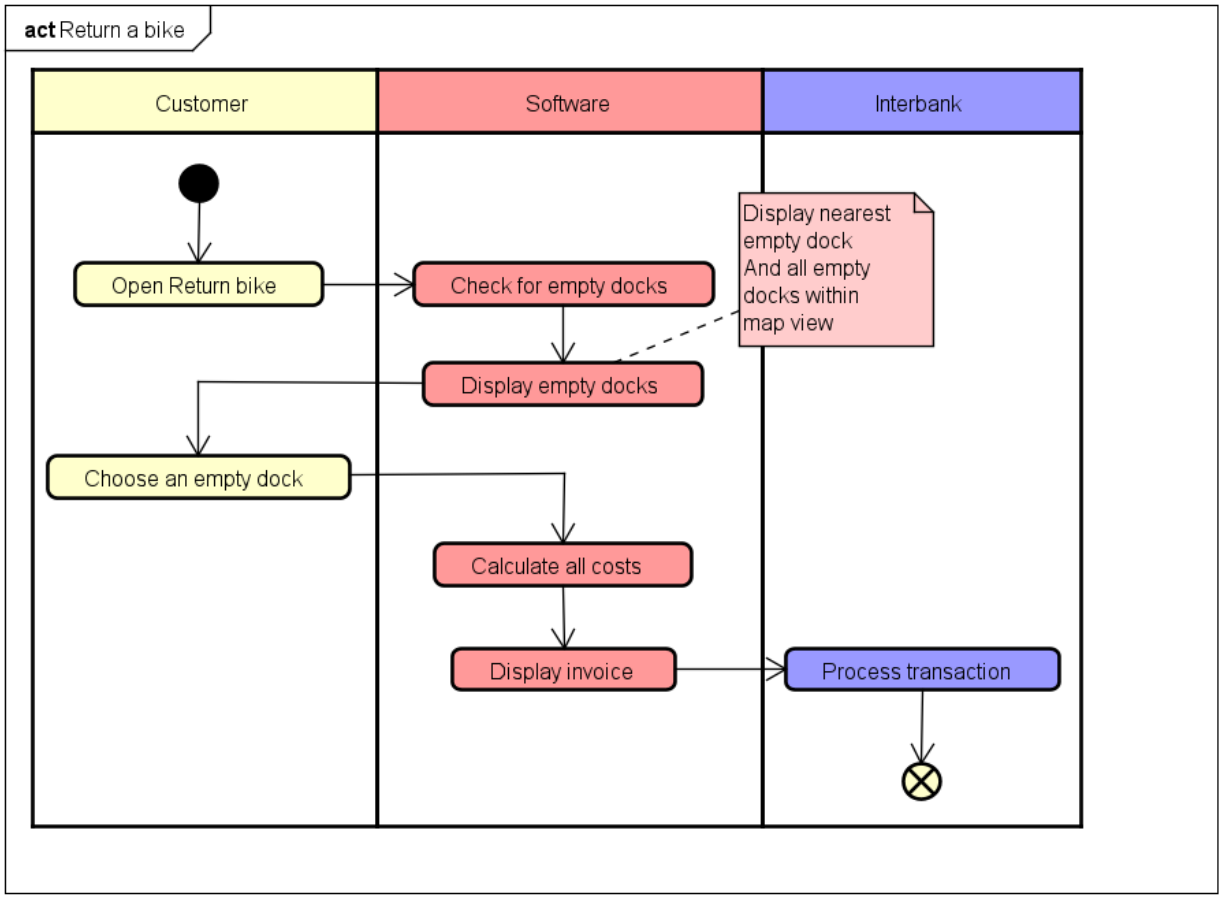

Figure 1. Return bike Activity diagram

7. Input data

None

8. Output data

Table 2. Output data for renting invoice

No	Data fields	Description	Display format	Example
1	Bike type			Giant XP
2	Bike status	Depends on bike type		34%

3	Renting pricing type	24-hour pass or normal		
4	Renting time		X h : Y ‘	1h15’
5	Deposits		▪ Positive number ▪ Use “.” to separate thousands ▪ Currency is VND	+30.000 VND
6	Rental fees			-100.000 VND
7	Refunds	Optional		+0 VND
8	Total charged amount			-70.000 VND

9. Postconditions

None