

# GRAPHICAL USER INTERFACE DESIGN SPECIFICATIONS

## 1. SCREEN CONFIGURATION

### Display

Number of colors supported: 16,777,216 colors

Resolution: 1366×768 (empty space will be filled by white padding)

### Screen

Location of standard buttons: At the bottom (vertically) and in the right (horizontally) of the frame

Location of the messages: Starting from the top vertically and in the left horizontally of the frame down to the bottom.

Display of the screen title: The title is located at the top of the frame in the left.

Consistency in expression of alphanumeric numbers: comma for separator of thousand while strings only consist of characters, digits, commas, dots, spaces, underscores, and hyphen symbol.

### Control

Size of the text: medium size (mostly 24px).

Font: Segoe UI.

Color: #000000

Input check process: Should check if it is empty or not. Next, check if the input is in the correct format or not.

Sequence of moving the focus: There will be no stack frames. Most of screen will be displayed as pop-up screen upon the home screen, while the pop-up screen is on, the home screen can't be operated.

Sequences of the screens:

1. Splash screen
2. Home screen
3. Station info screen
4. Bike info screen

5. Renting Confirmation popup
6. Payment Method screen
7. Payment Result screen
8. Rented Bike info screen
9. Return Confirmation popup
10. Return bike screen
11. Invoice screen
12. Barcode Screen
13. Error popup
14. Success popup

### **Direct input from the keyboard**

There will be no shortcuts. There are back buttons to move back to the previous screen. Also, there is the close button “X” located at the title bar to the right to close the screen. There are header menus at every screen.

### **Error**

A message will be given to notify the users what is the problem.

## **2. SCREEN IMAGES**

Design file: [Figma](#)



Figure 1. Splash screen

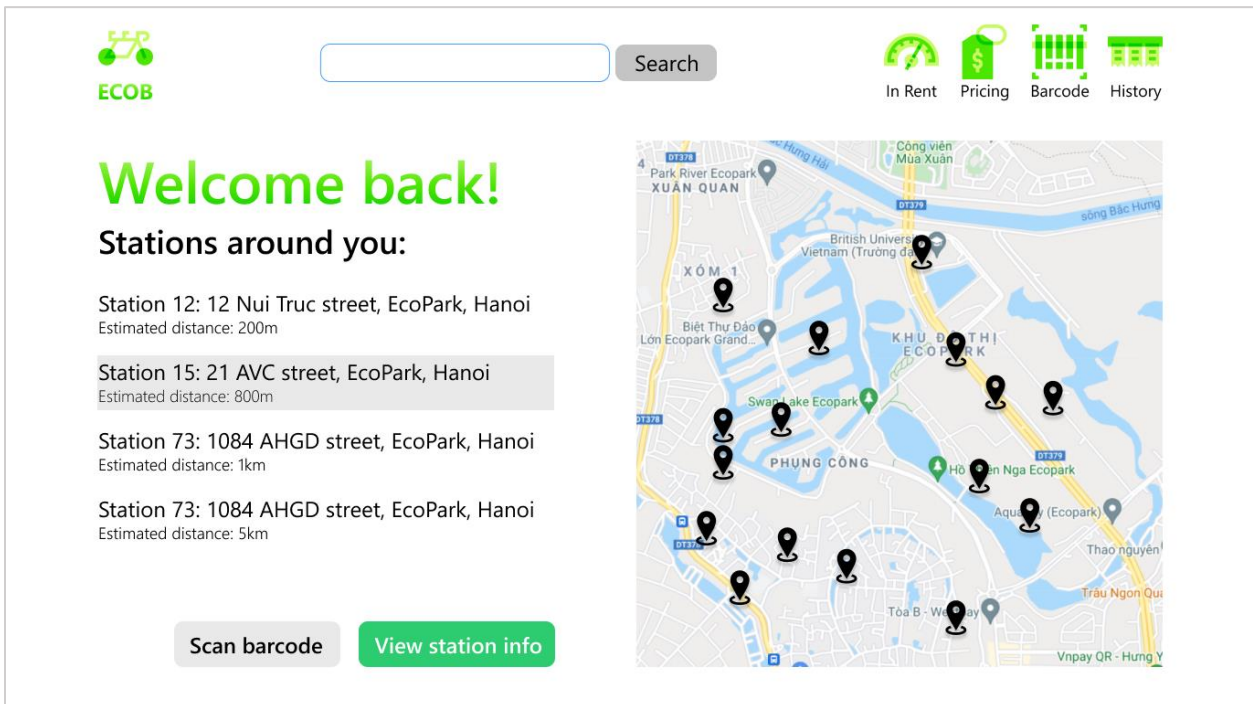


Figure 2. Home screen

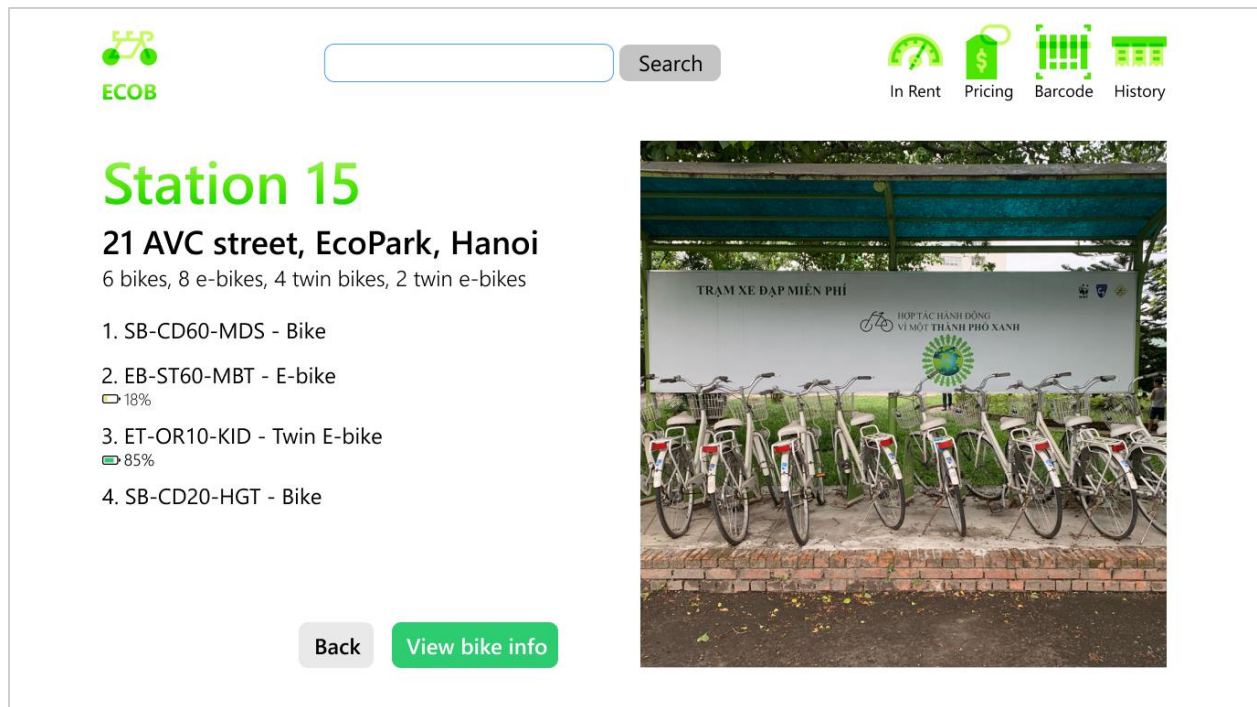


Figure 3. Station info screen

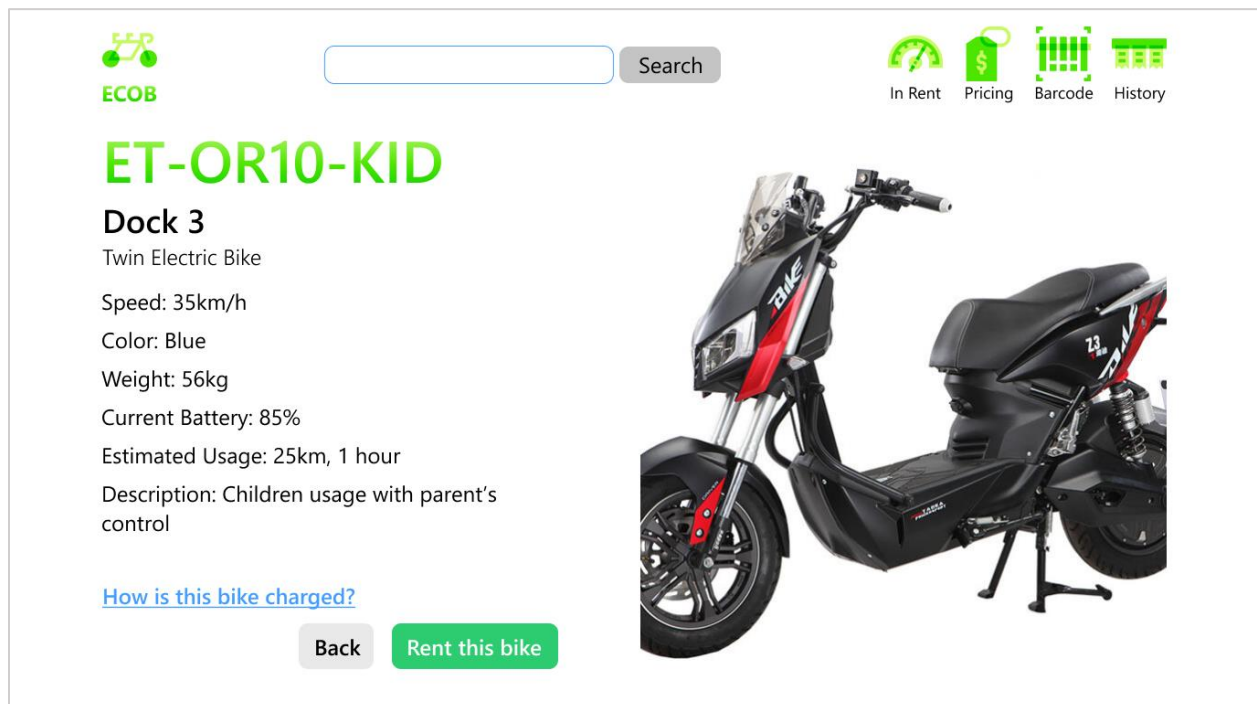


Figure 4. Bike info screen

## Renting Confirmation

# ST-OR10-KID


### Dock 3

Twin Electric Bike

Current Battery: 85%

Estimated Usage: 25km, 1 hour


Deposit: **900,000VND**




Back


Confirm


Figure 5. Renting confirmation popup




Search

  
In Rent

  
Pricing

  
Barcode

  
History

## Payment

### Select a payment method

☐ Credit Card

Card Number:

Card Holder:

Expiration Date:

Issuing Bank:

Security Code

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Confirm

Figure 6. Payment method screen

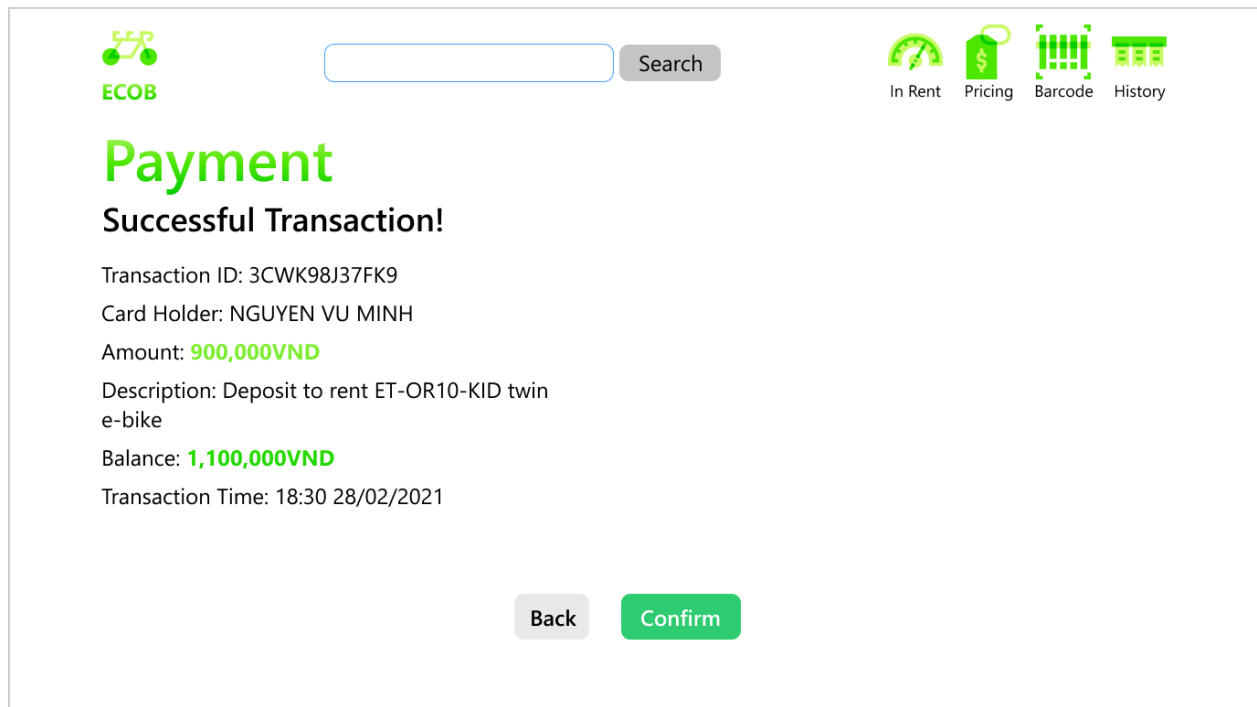


Figure 7. Payment results screen

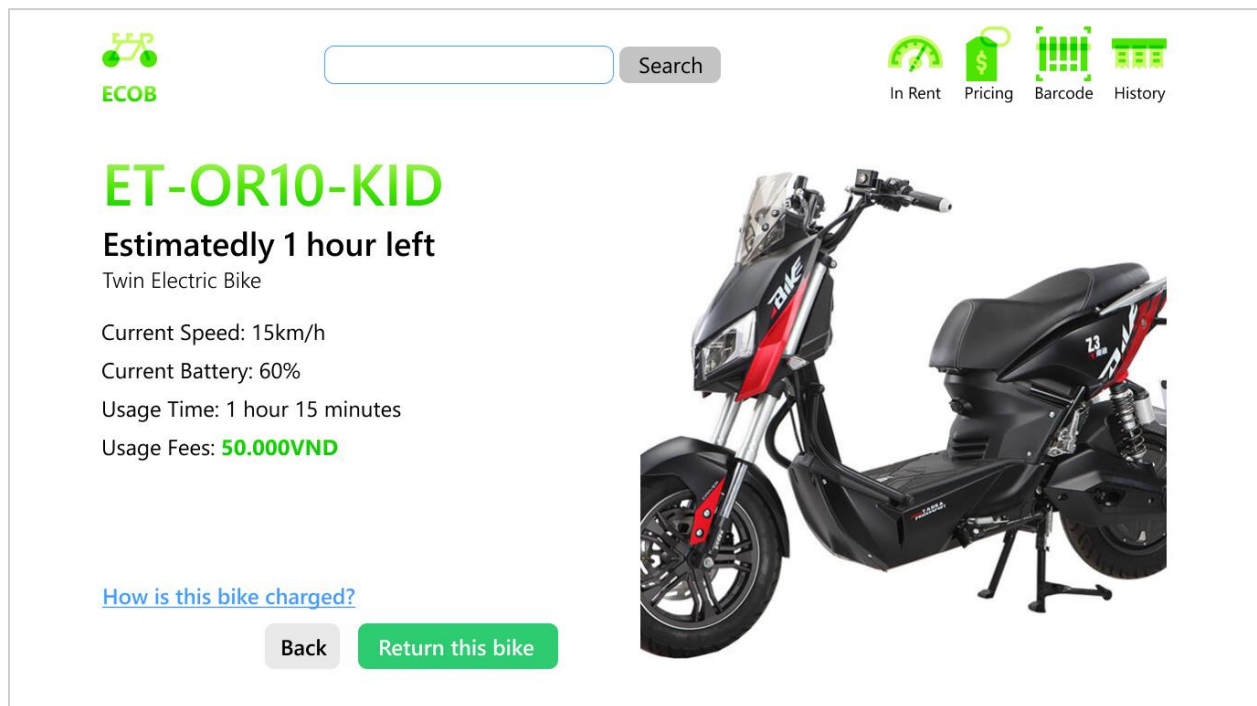


Figure 8. Rented bike info screen

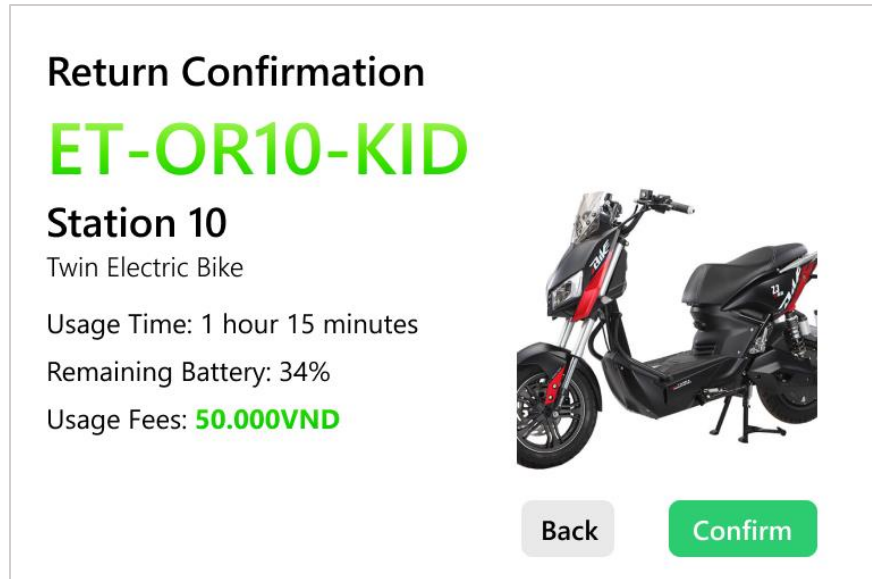


Figure 9. Return confirmation popup

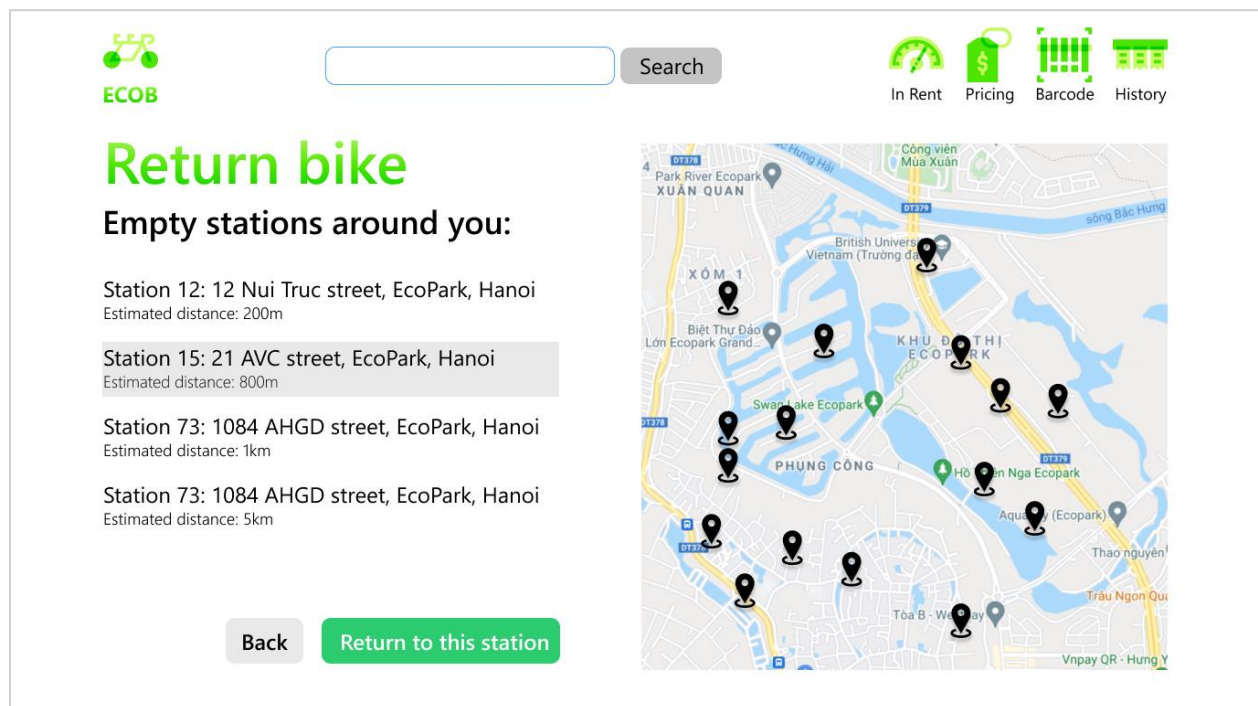


Figure 10. Return bike screen



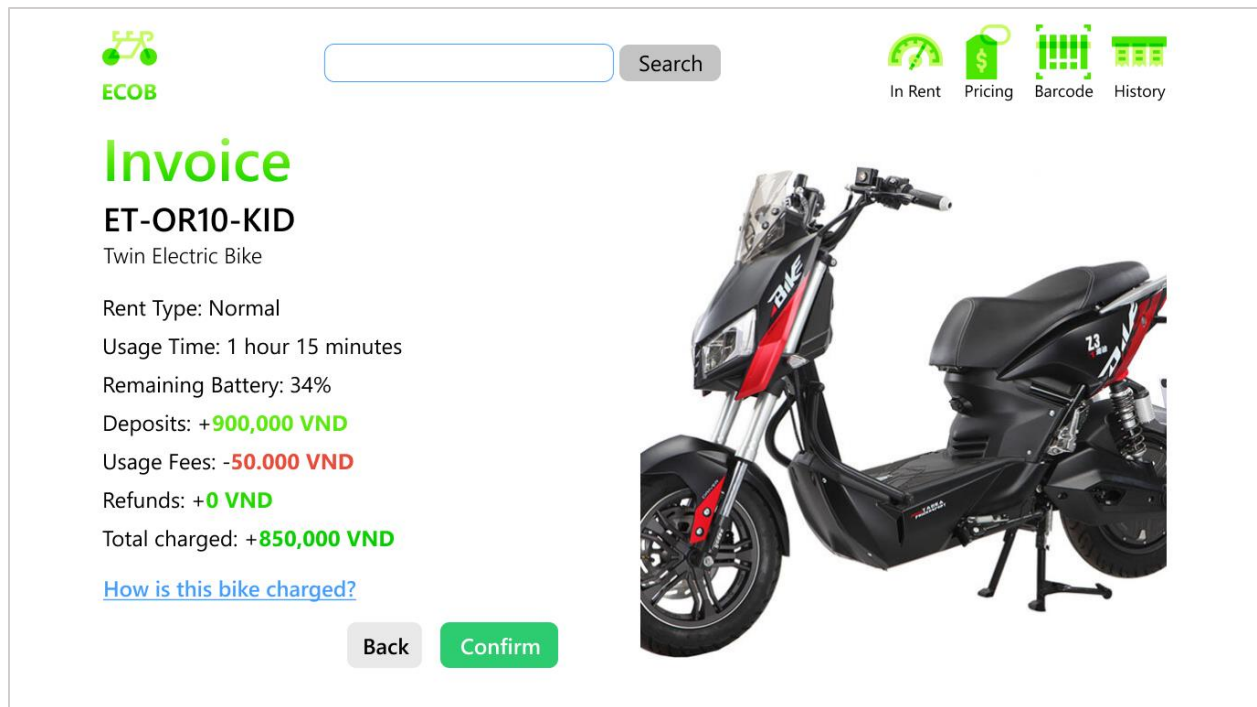


Figure 11. Invoice screen

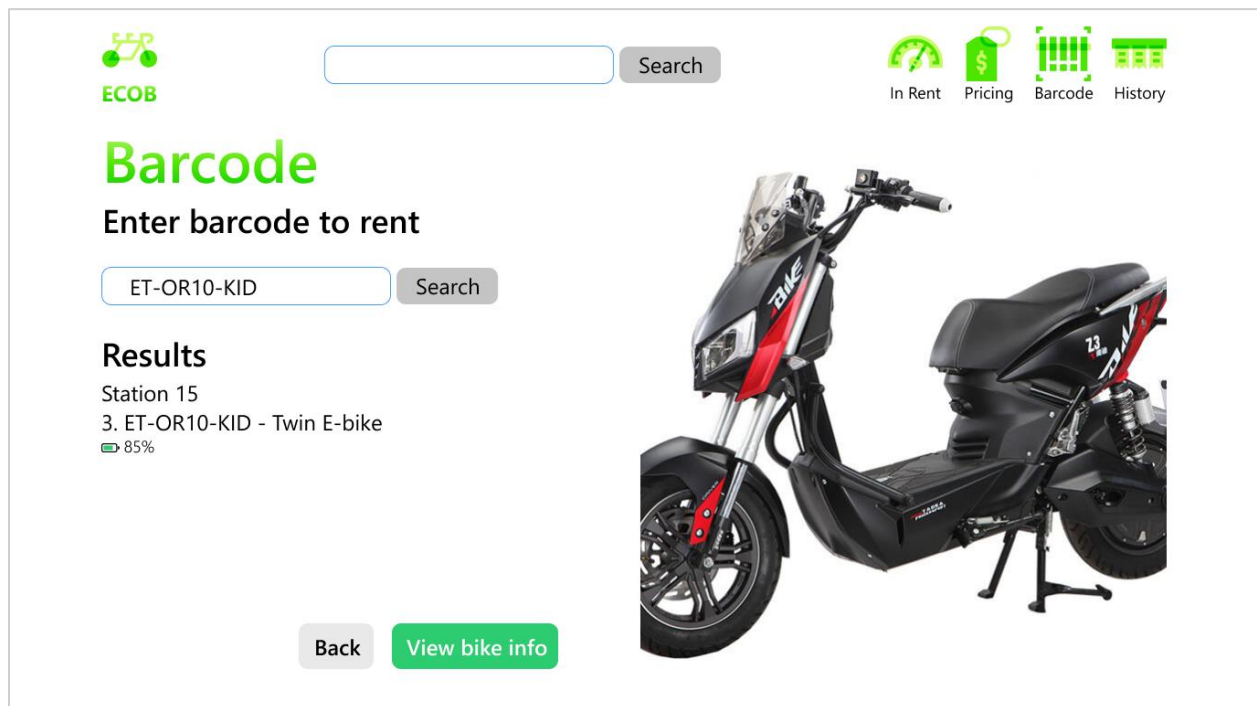


Figure 12. Barcode screen



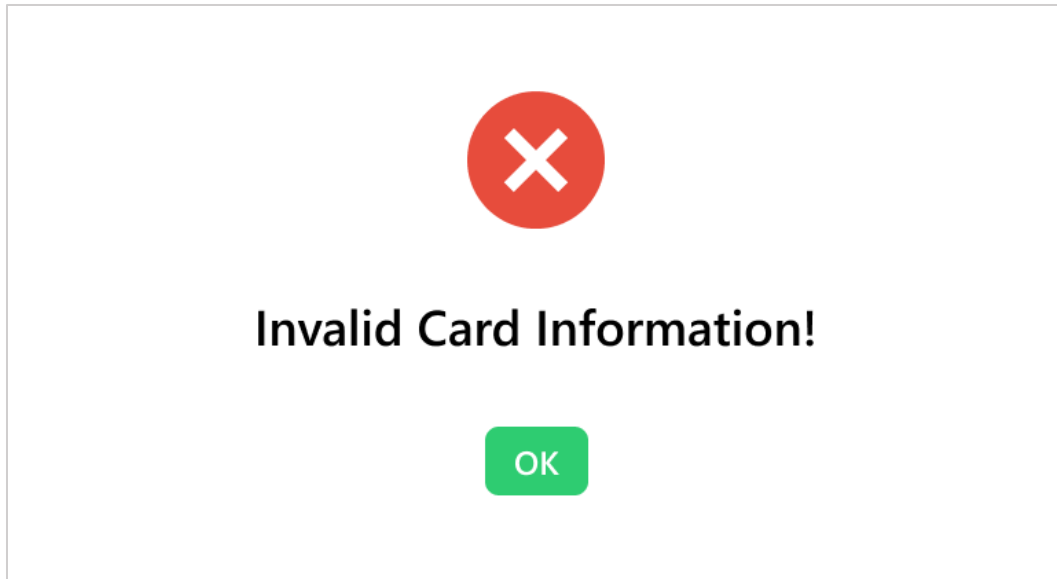


Figure 13. Error popup

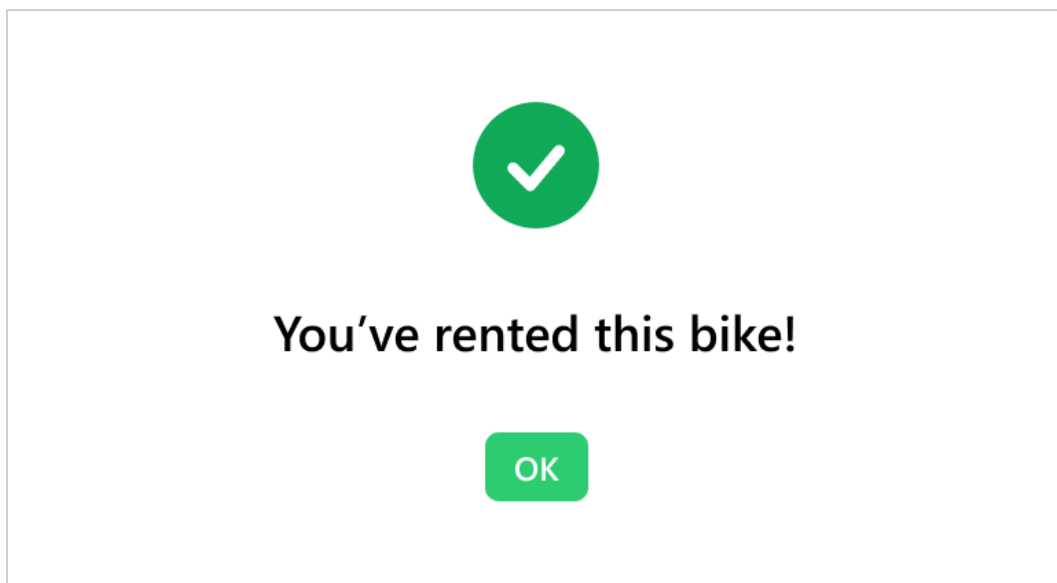


Figure 14. Success popup

### 3. SCREEN TRANSITION DIAGRAM

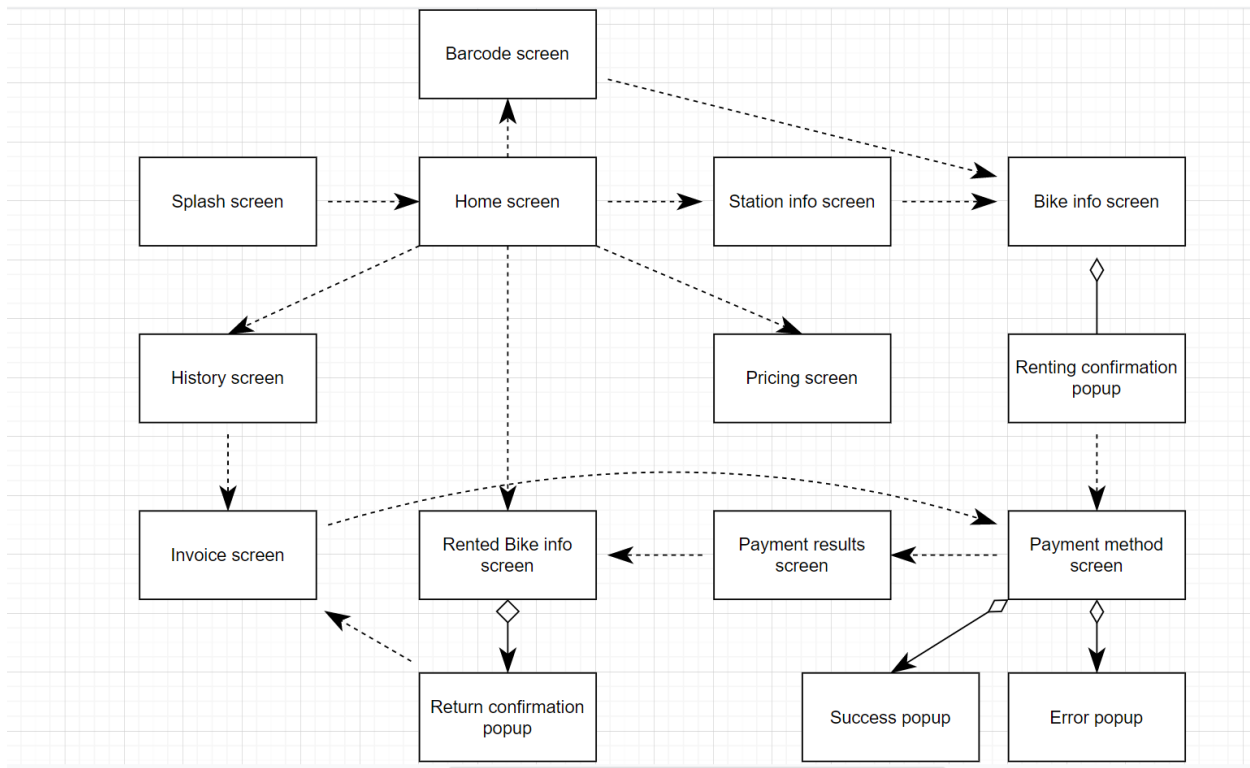
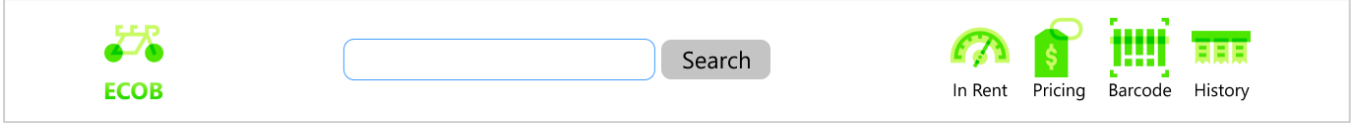


Figure 15. Screen transition diagram

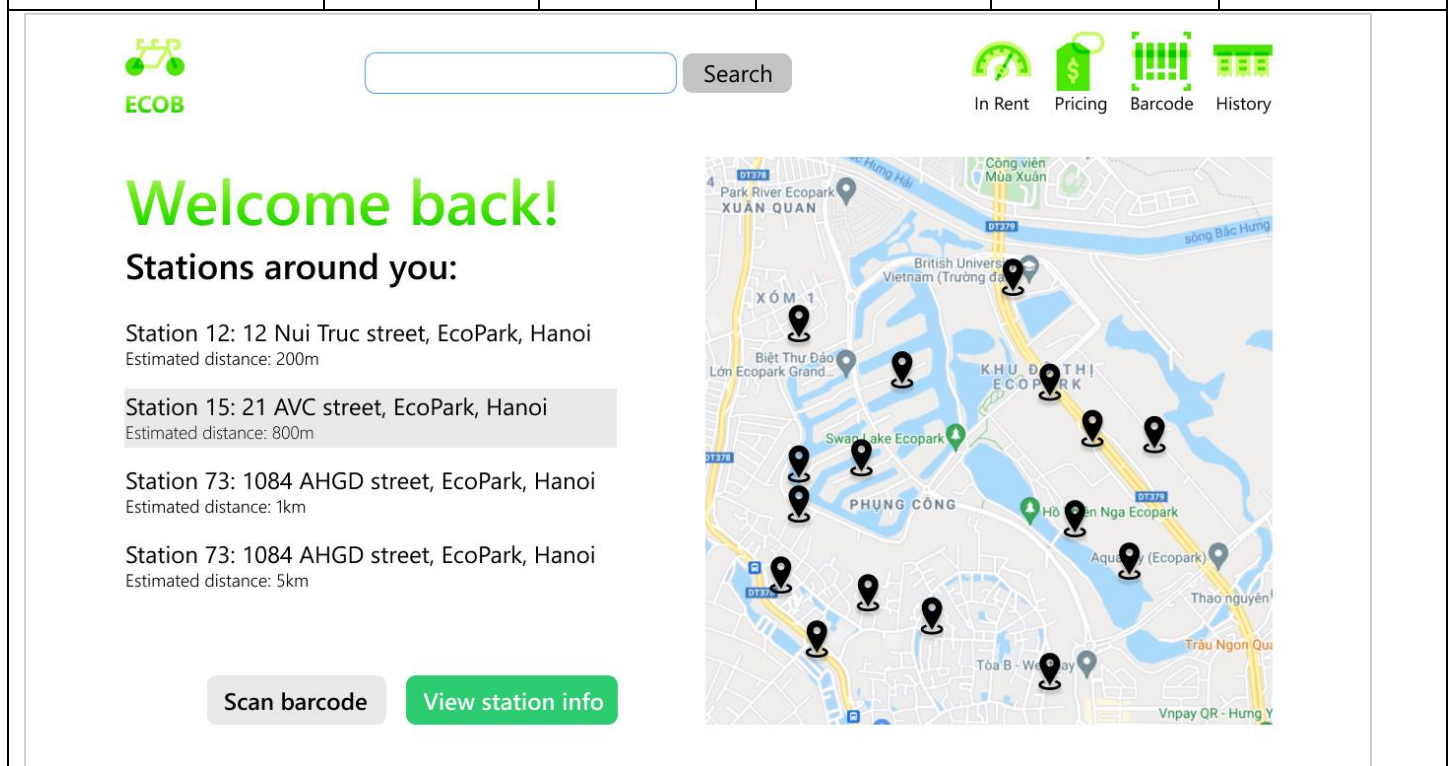
### 4. DETAILED SCREEN SPECIFICATIONS

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Header menu	31/10/2021	Bui Manh Tu	Bui Manh Tu	Bui Manh Tu
					
Control	Operation		Function		
App logo	Click		Back to Home screen		
Search bar	Initial		Search for stations		
In Rent Button	Click		View info of the bike currently in use		

Pricing Button	Click	View pricing policy
Barcode Button	Click	Scan barcode to rent bike
History Button	Click	View renting history and invoices

Table 1. Header menu specification

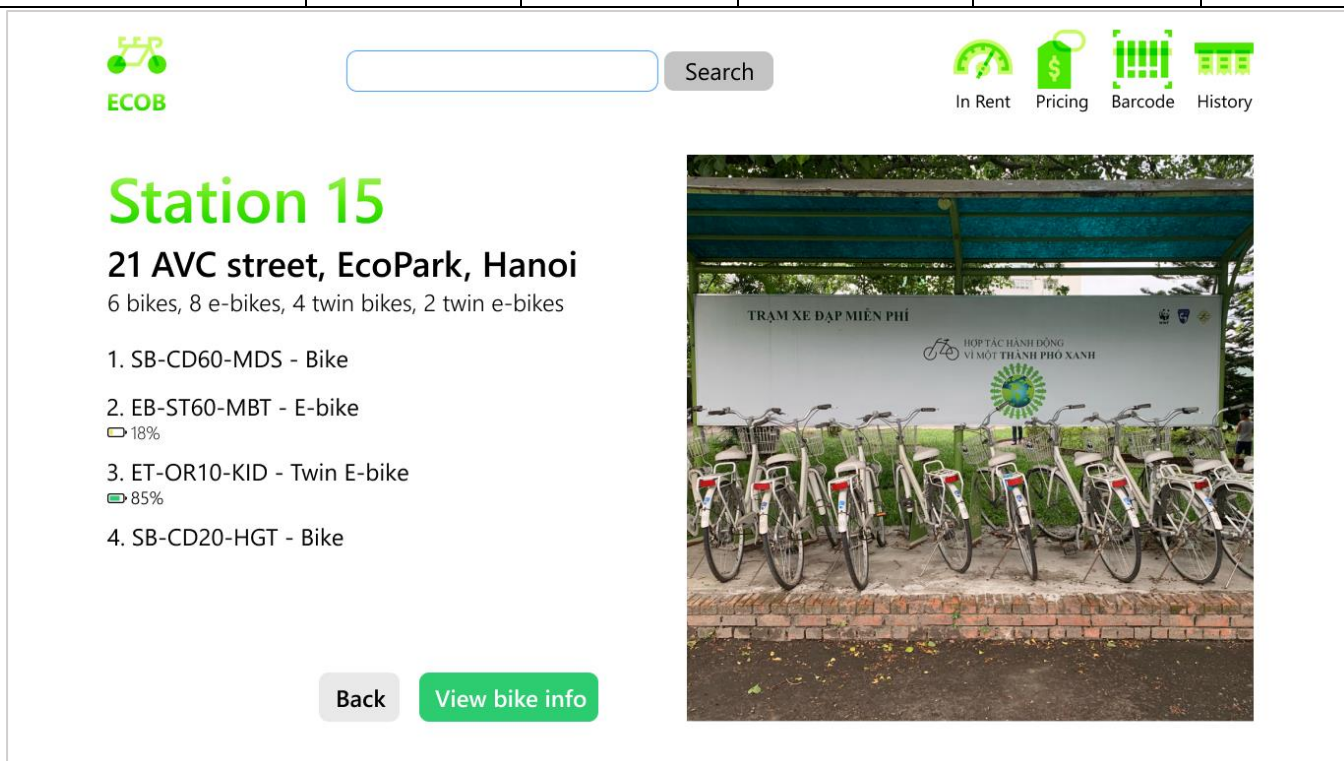
<b>AIMS Software</b>		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Home screen	25/10/2021	Bui Manh Tu	Bui Manh Tu	Lê Huy Hoàng



Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for map	Initial	Display the map
Area for scroll list	Initial	Locate and display the stations
View station info Button	Click	View selected station info
Scan barcode Button	Click	Scan barcode to rent bike

Table 2. Home screen specification


AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Station info screen	25/10/2021	Bui Manh Tu	Bui Manh Tu	Lê Huy Hoàng







Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for image	Initial	Display station image
Area for list	Initial	Display station info
View bike info Button	Click	View selected bike info
Back Button	Click	Back to Home screen

Table 3. Station info screen

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Bike info screen	25/10/2021	Bui Manh Tu	Bui Manh Tu	Lê Huy Hoàng



Search

 In Rent
  Pricing
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## ET-OR10-KID

### Dock 3

Twin Electric Bike

Speed: 35km/h

Color: Blue

Weight: 56kg


Current Battery: 85%

Estimated Usage: 25km, 1 hour

Description: Children usage with parent's control


[How is this bike charged?](#)

Back
Rent this bike







Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for image	Initial	Display station image
Area for list	Initial	Display station info
Hyperlink	Click	Display pricing policy
Rent this bike Button	Click	Rent bike
Back Button	Click	Back to Station info screen

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Invoice screen	31/10/2021	Bui Manh Tu	Bui Manh Tu	Bui Manh Tu





 In Rent
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# Invoice

## ET-OR10-KID

Twin Electric Bike

Rent Type: Normal  
Usage Time: 1 hour 15 minutes  
Remaining Battery: 34%  
Deposits: +900,000 VND  
Usage Fees: -50.000 VND  
Refunds: +0 VND  
Total charged: +850,000 VND

[How is this bike charged?](#)



Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for image	Initial	Display bike image
Area for list	Initial	Display invoice info
Hyperlink	Click	Display pricing policy
Confirm Button	Click	Navigate to Home screen

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Renting confirmation popup	31/10/2021	Bui Manh Tu	Bui Manh Tu	Bui Manh Tu

## Renting Confirmation

# ST-OR10-KID

### Dock 3

Twin Electric Bike

Current Battery: 85%

Estimated Usage: 25km, 1 hour

Deposit: **900,000VND**




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Confirm





Control	Operation	Function
Area for image	Initial	Display bike image
Area for list	Initial	Display bike info and deposit
Confirm Button	Click	Confirm to rent bike
Back Button	Click	Close this popup



AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Payment method screen	27/10/2021	Bui Manh Tu	Bui Manh Tu	Nguyen Vu Minh





 In Rent
 Pricing
 Barcode
 History

## Payment

### Select a payment method

☐ Credit Card

Card Number:

Card Holder:

Expiration Date:

Issuing Bank:


Security Code:

Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Confirm Button	Click	Confirm Card info
Back Button	Click	Back to Bike info screen


Screen name	Payment method screen			
Item name	Number of digits (bytes)	Type	Field attribute	Remarks
Name	50	Character	Black	Left-justified
Card number	20	Numeral	Black	Left-justified

Issuing bank	50	Character	Black	Left-justified
Expiration date	5	Character	Black	First field for month and second for year
Security code	3	Numeral	Black	Left-justified


AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Payment results screen	27/10/2021	Bui Manh Tu	Bui Manh Tu	Nguyen Vu Minh




Search




In Rent



Pricing



Barcode



History

Payment

Successful Transaction!

Transaction ID: 3CWK98J37FK9

Card Holder: NGUYEN VU MINH

Amount: 900,000VND

Description: Deposit to rent ET-OR10-KID twin e-bike

Balance: 1,100,000VND

Transaction Time: 18:30 28/02/2021


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Confirm





Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Confirm Button	Click	Navigate to Home screen
Back Button	Click	Back to Payment method screen

Screen name	Payment results screen			
Item name	Number of digits (bytes)	Type	Field attribute	Remarks
Transaction ID	15	Character	Default	Left-justified
Card holder name	50	Character	Default	Left-justified
Amount	15	Numeral	Main gradient	Left-justified
Description	100	Character	Default	Left-justified
Balance	15	Numeral	Main gradient	Left-justified
Transaction time	50	Date & Time	Default	Left-justified

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Rented Bike info screen	25/10/2021	Bui Manh Tu	Bui Manh Tu	Lê Huy Hoàng





 In Rent
 Pricing
 Barcode
 History

## ET-OR10-KID

Estimatedly 1 hour left

Twin Electric Bike


Current Speed: 15km/h

Current Battery: 60%

Usage Time: 1 hour 15 minutes

Usage Fees: **50.000VND**

[How is this bike charged?](#)



Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for image	Initial	Display station image
Area for list	Initial	Display station info
Hyperlink	Click	Display pricing policy
Rent this bike Button	Click	Rent bike
Back Button	Click	Back to Home screen

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Invoice screen	25/10/2021	Bui Manh Tu	Bui Manh Tu	Bui Manh Tu



Search



In Rent



Pricing



Barcode



History

# Invoice

**ET-OR10-KID**

Twin Electric Bike

Rent Type: Normal

Usage Time: 1 hour 15 minutes

Remaining Battery: 34%

Deposits: +**900,000 VND**

Usage Fees: -**50.000 VND**

Refunds: +**0 VND**

Total charged: +**850,000 VND**

[How is this bike charged?](#)

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Confirm



Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for image	Initial	Display bike image
Area for list	Initial	Display invoice info
Hyperlink	Click	Display pricing policy
Confirm Button	Click	Navigate to Home screen

AIMS Software		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Barcode screen	25/10/2021	Bui Manh Tu	Bui Manh Tu	Nguyen Vu Minh



Search



In Rent



Pricing



Barcode



History

## Barcode

Enter barcode to rent

ET-OR10-KID

Search

### Results

Station 15

3. ET-OR10-KID - Twin E-bike

85%



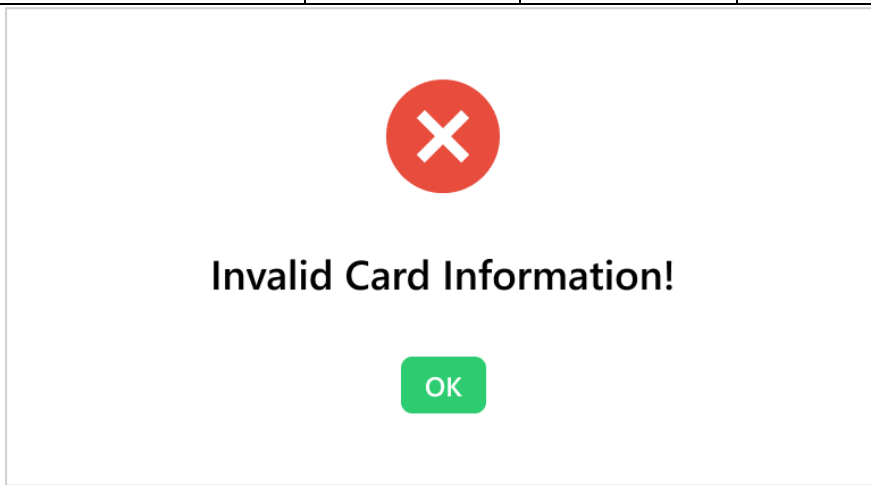
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View bike info

Control	Operation	Function
Header	Initial	See Table 1. Header menu specification
Area for image	Initial	Display bike image
Area for list	Initial	Display search results
Search bar	Initial	Type barcode
View bike info Button	Click	View bike info
Back Button	Click	Back to Home screen

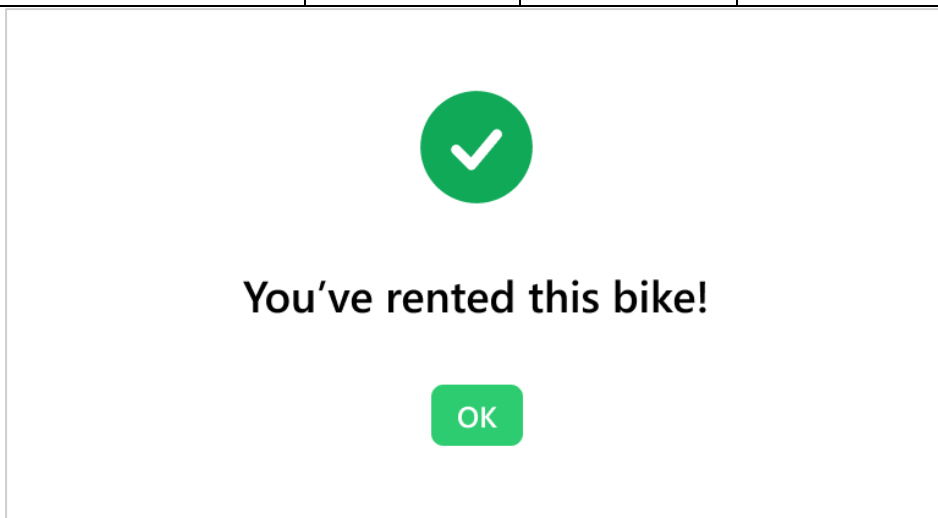
Screen name	Barcode screen			
Item name	Number of digits (bytes)	Type	Field attribute	Remarks
Barcode	20	Character	Black	Center

<b>AIMS Software</b>		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Error popup	25/10/2021	Bui Manh Tu	Bui Manh Tu	Le Huy Hoang



<b>Control</b>	<b>Operation</b>	<b>Function</b>
Area for message	Initial	Display error message
OK Button	Click	Close popup

<b>AIMS Software</b>		Date of creation	Approved by	Reviewed by	Person in charge
Screen specification	Success popup	25/10/2021	Bui Manh Tu	Bui Manh Tu	Le Huy Hoang



<b>Control</b>	<b>Operation</b>	<b>Function</b>
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Area for message	Initial	Display success message
OK Button	Click	Close popup