

Cryptomoney App User Guide

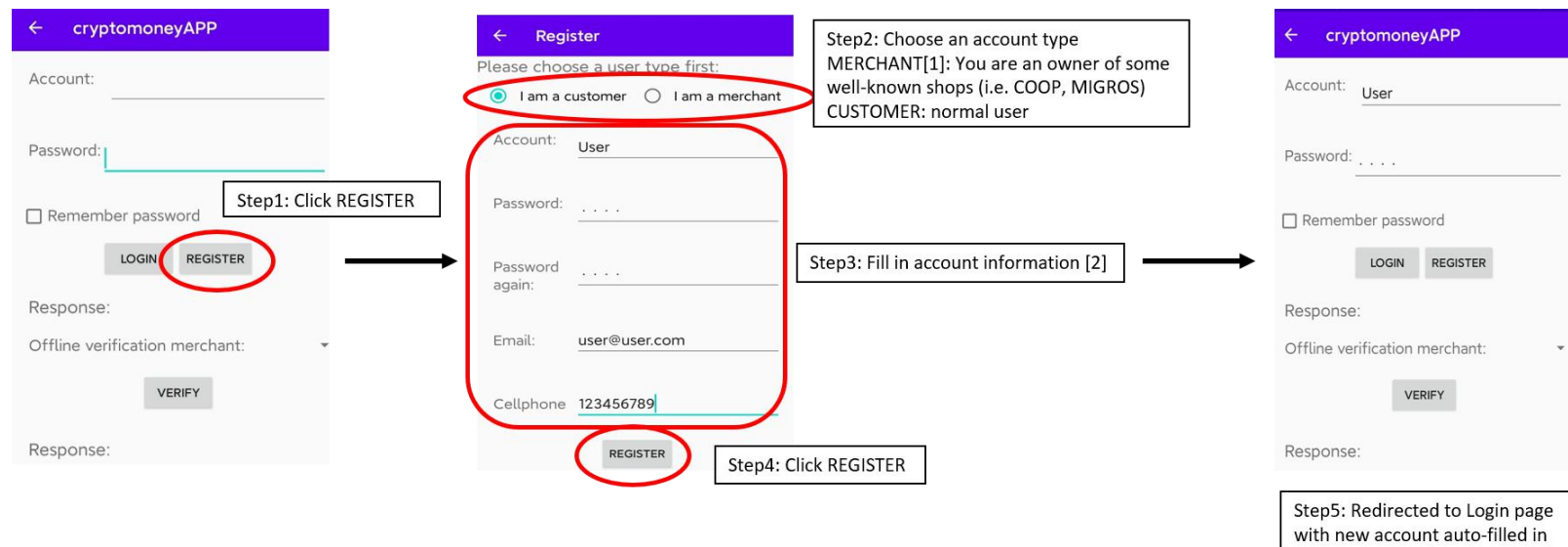
1. Introduction.....	2
2. App Instructions.....	2
2.1 Register a new account.....	2
2.2 Log in to your account.....	3
2.3 View your account info.....	3
2.4 Print your money.....	4
2.4.1 Print new free money.....	4
2.4.2 Print past free money.....	5
2.4.3 Print new merchant-specific money.....	6
2.4.4 Print past merchant-specific money.....	7
2.4.5 Different printing modes.....	8
2.5 Receive other's free money.....	10
2.6 Request other's free money (for merchant)	11
2.6.1 General requesting process.....	11
2.6.2 Change request amount.....	12
2.6.3 Cancel requesting money.....	13
2.7 Receive other's merchant-specific money (for merchant).....	14
2.8 Adjust font size.....	16
2.9 Log out your account.....	16

1. Introduction

This Android App is a prototype of a new crypto-money model. In this App, users can generate their own crypto-money and receive crypto-money from others in a safe and convenient way. Customers can pay with their crypto-money and merchants can verify the money offline. This user guide will explain how users can achieve that with this app.

2. App Instructions

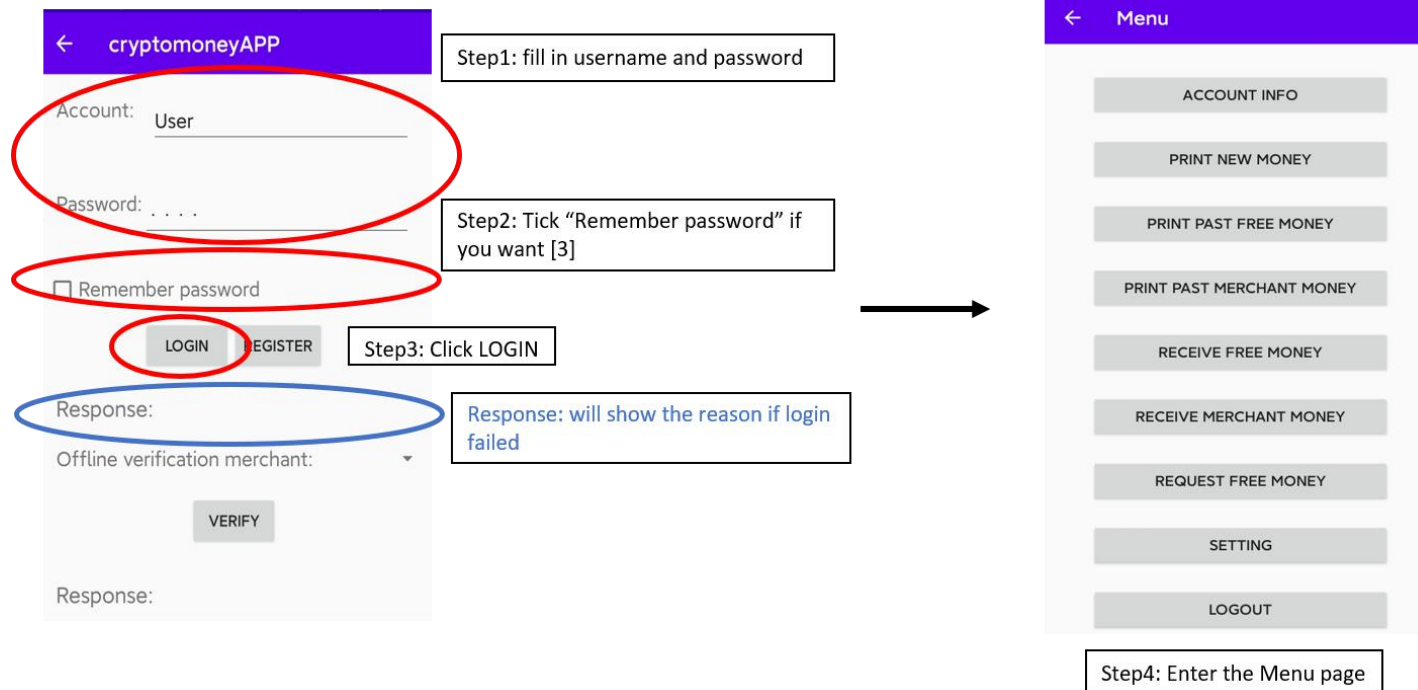
2.1 Register a new account



[1] You should not choose the merchant type if you are not sure

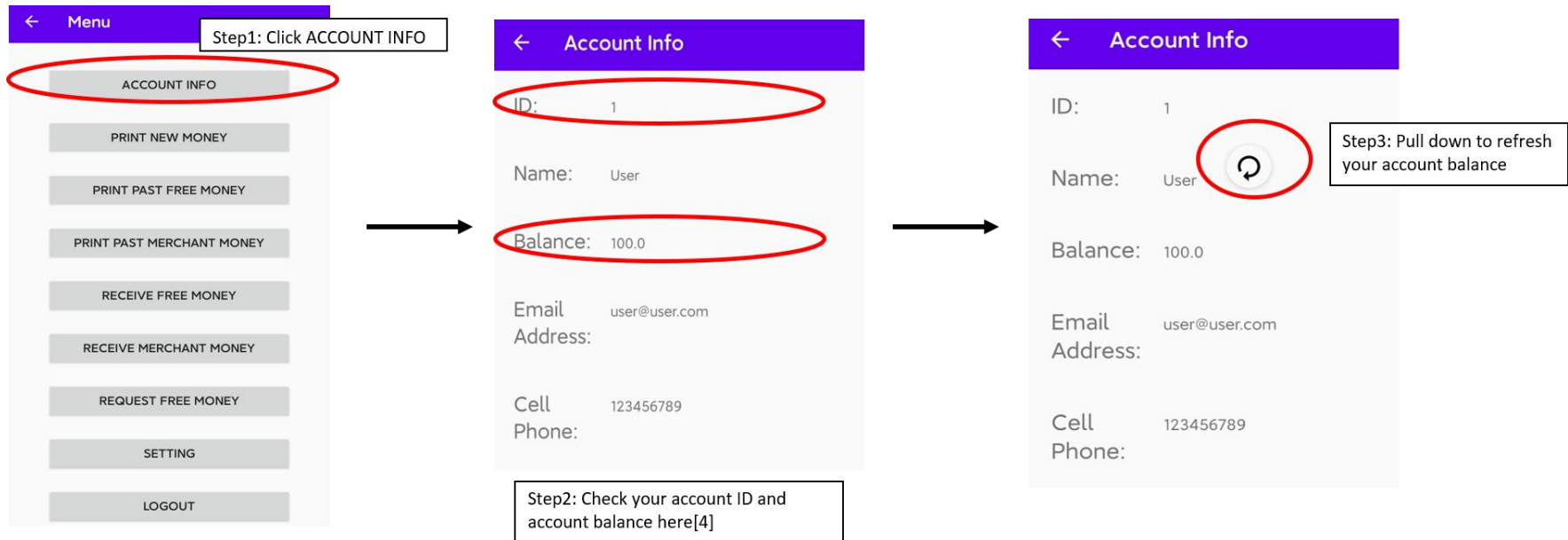
[2] Be careful, the account information cannot be modified after registration

2.2 Log in to your account



2.3 View your account info

[3] If you tick "Remember password", the next time you open the app, it will auto-fill the latest username and password you used. **Be careful not to tick this when you are not using your own phone**

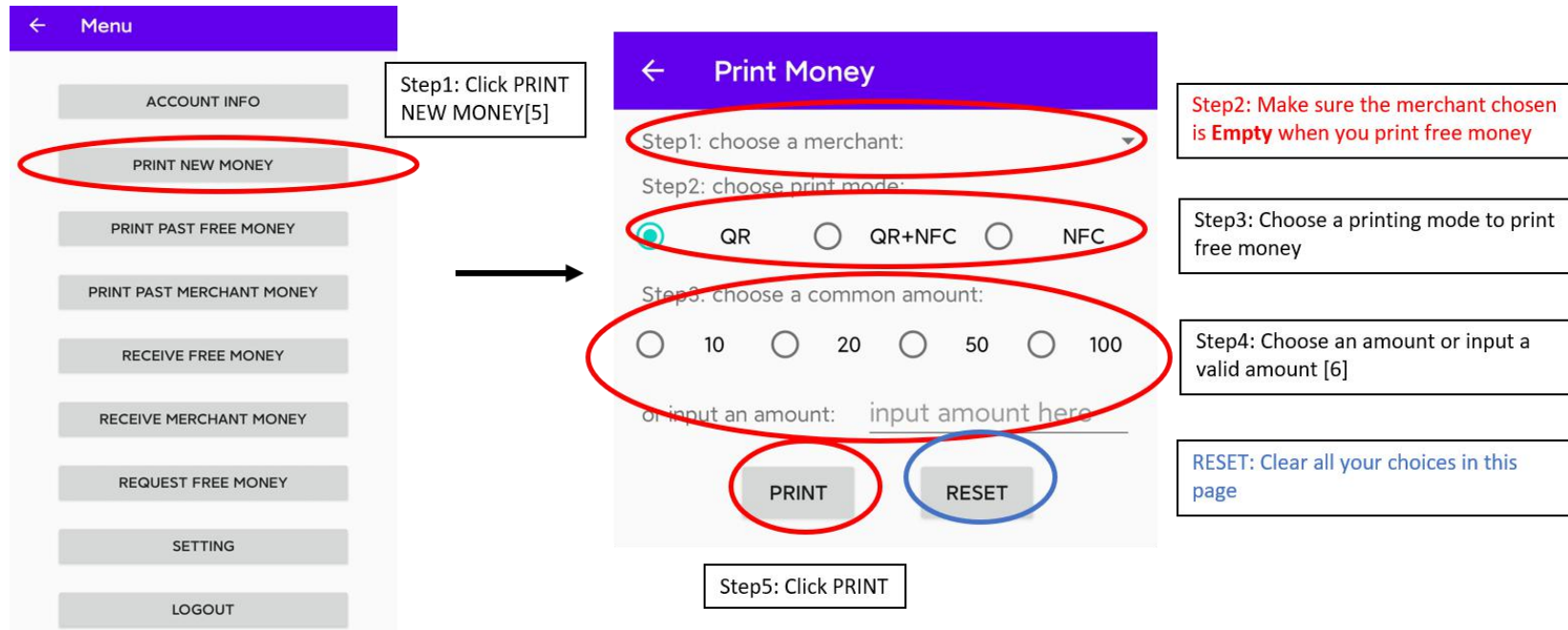



2.4 Print your money

The app provides two kinds of money to print. The first one is called **free money**. A free money can be received by **anyone** as long as he/she has your crypto-money. The other one is called **merchant-specific money**, this money can **only** be received by the merchant you select when printing the money.

2.4.1 Print new free money

[5] Please grant any permission that the app asks you (i.e. Bluetooth, Location, Storage, Camera)



Before entering the Print Money page, there could appear a loading icon  meaning that the app is searching for a **MEMO BIRD printer**. See more details in 2.4.5.

2.4.2 Print past free money

Once a free money has been generated, your account balance will be **immediately deducted** by the corresponding amount. You can revoke a free money by receiving it by yourself (see 2.5). You can also print a free money that has been generated by you **on the**

[6] If your account balance is not enough, you will not be allowed to print this money

[7] The list will only show the records that have not been received by anyone yet

same phone before (and **not received by anyone** yet). When printing a past free money, your account balance will not change. This can be useful when you accidentally lose or break your money.

Step1: Click PRINT PAST FREE MONEY

Step2: Choose a printing mode to print past free money

Step3: Choose a past free money record to print (pull down to refresh)[7]
Amount: crypto-money value
Address: the unique identifier of this money
Time: time when you first generate this money

RESET: Clear all your choices in this page

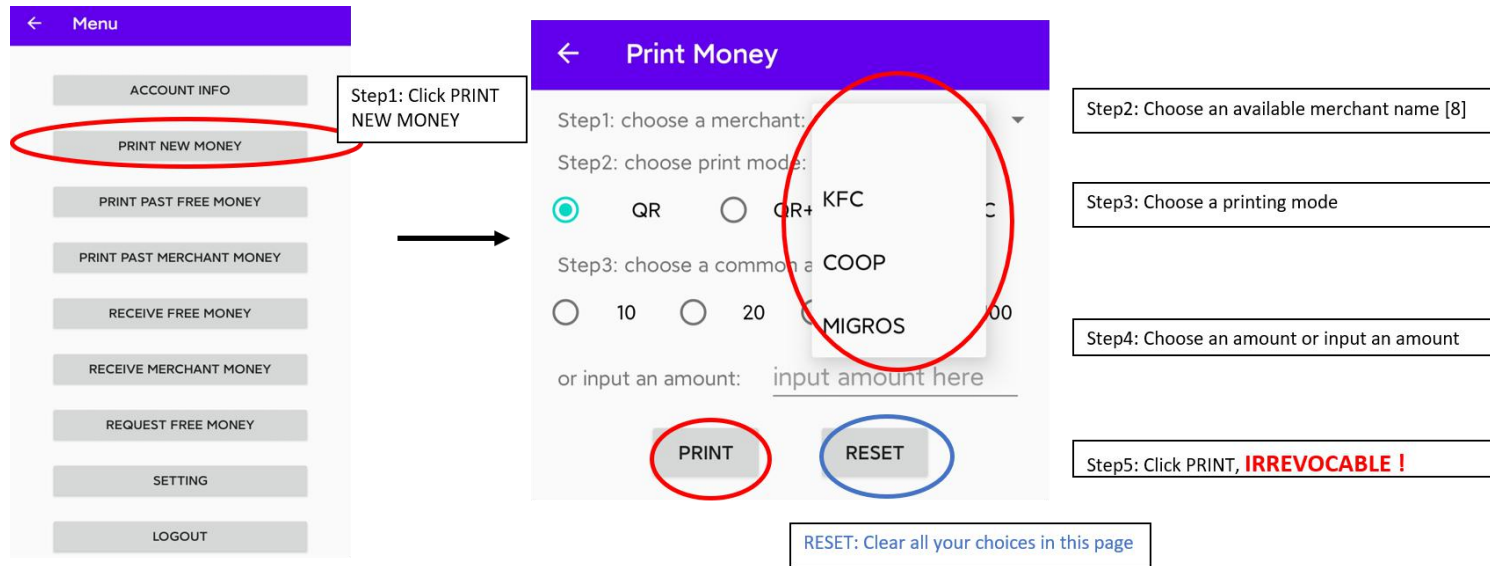
Step4: Click PRINT

No.	Amount	Address	Time
1	5.0	PBQZdj0Stv6FqlufCPa	2020-11-14 16:09:15
2	10.0	CPQSVyQBLfDNv	2020-11-14 16:43:26

2.4.3 Print new merchant-specific money

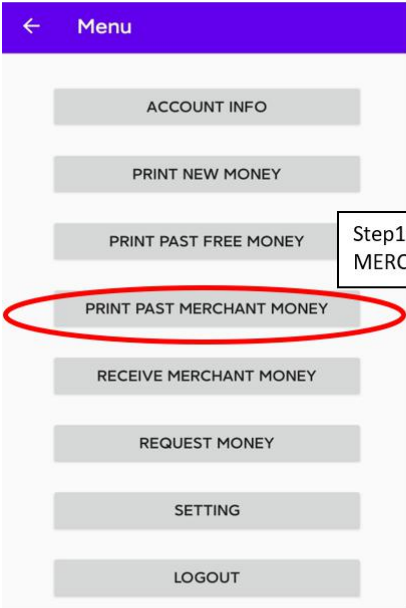
The merchant-specific money guarantees that **only** the specified merchant can decrypt and receive this money. **BE CAREFUL**, once you have generated a merchant-specific, you **CANNOT** revoke it (but only spend it).

[8] Depend on how many merchants have registered in the system

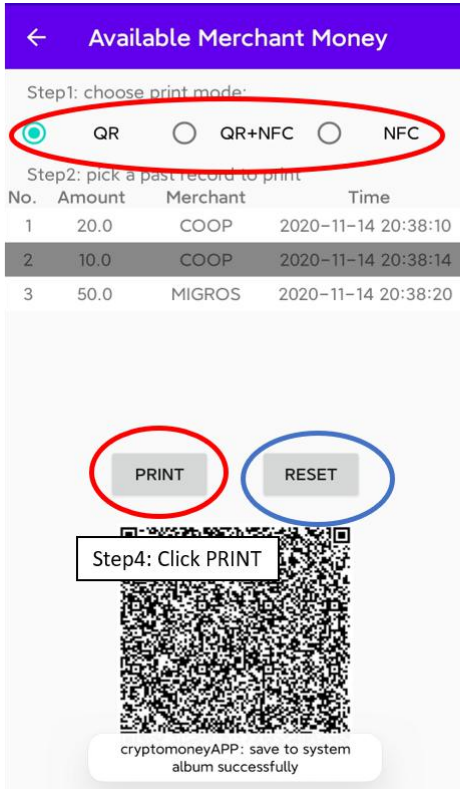


2.4.4 Print past merchant-specific money

Once a merchant-specific money has been generated, your account balance will be **immediately deducted**. You can also print a merchant-specific money that has been generated by you **on the same phone** before (and **not received by the merchant yet**). When printing a past merchant-specific money, your account balance will not change.



Step1: Click PRINT PAST MERCHANT MONEY



Step2: Choose a printing mode to print past merchant-specific money

Step3: Choose a past merchant-specific money record to print (pull down to refresh)
 Amount: crypto-money value
 Merchant: the specified merchant of this money
 Time: time when you first generate this money

RESET: [Clear all your choices in this page](#)

Step4: Click PRINT

2.4.5 Different printing modes

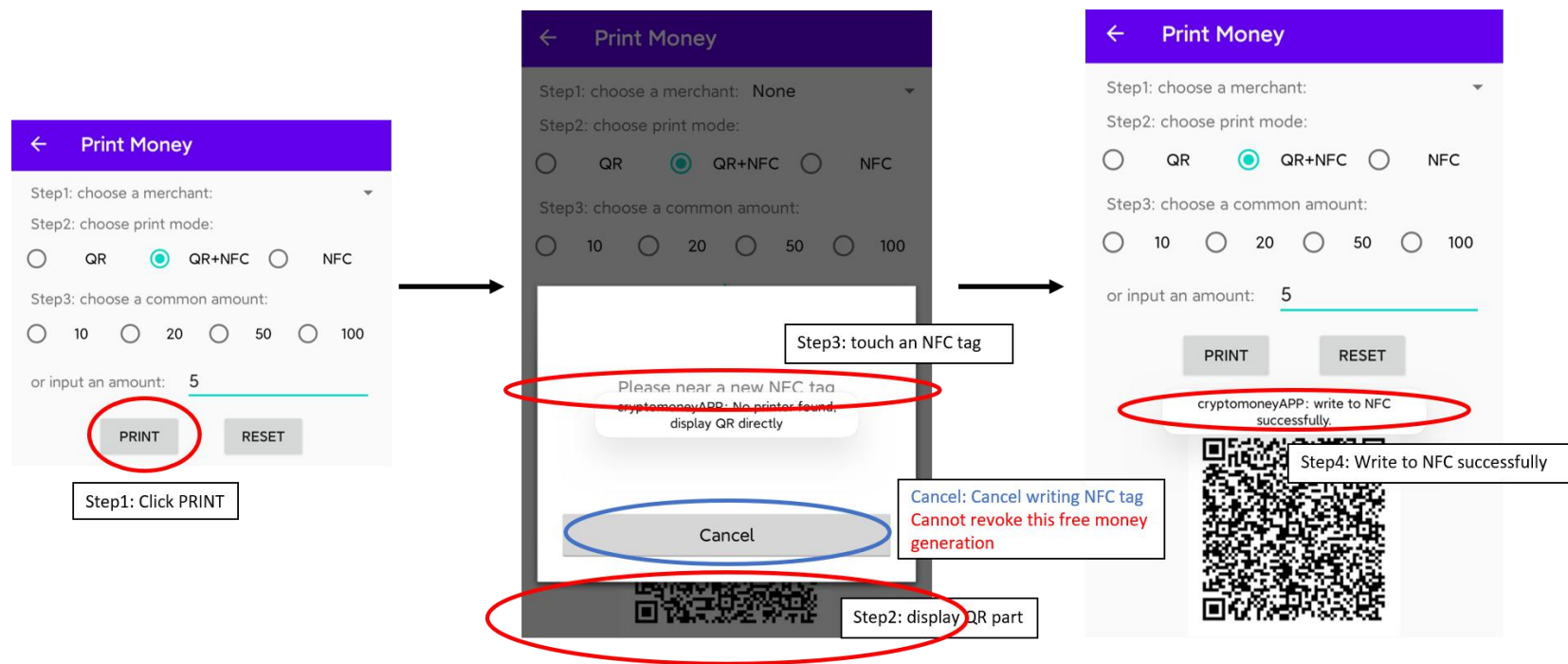
There are three printing modes to print money. The following table explains them.

Mode	Equipment	Description	Security
QR	(MEMOBIRD printer)	Store all crypto-money information in a QR code	medium

QR+NFC	(MEMO BIRD printer), NFC tag[9]	Store crypto-money information in both QR code and NFC tag	high
NFC	NFC tag[9]	Store all crypto-money information in an NFC tag	medium

In the QR and QR+NFC mode, the generated QR image will also be automatically saved to your system album.

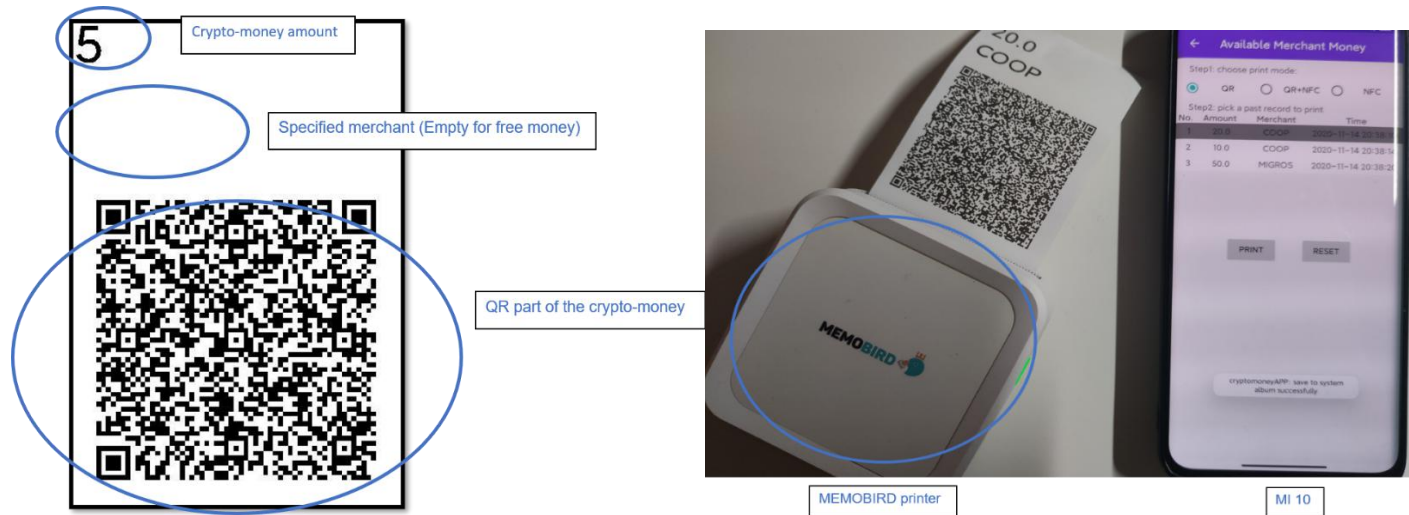
The following figures show the free money printing process without a MEMO BIRD printer in QR+NFC mode.



[9] NFC tag storage must be >400 bytes (usually 888 bytes)

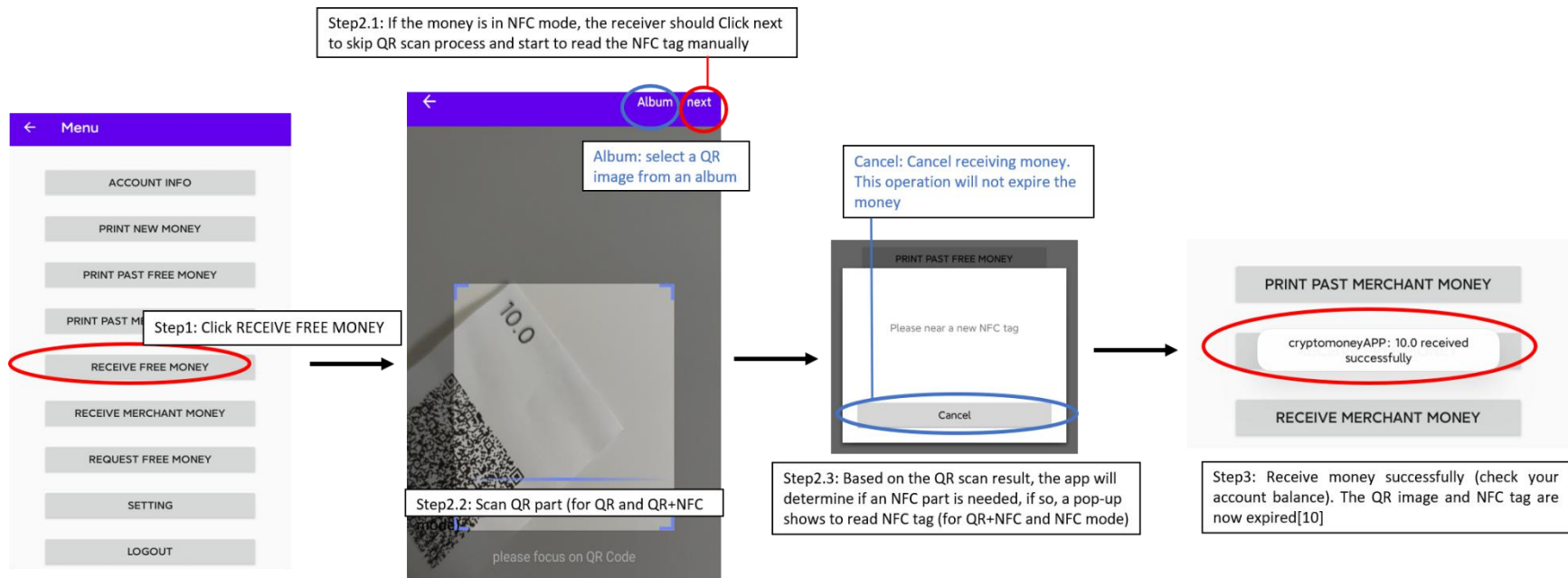
The left figure shows the QR part format printed out / saved in the system album.

The right figure shows the COOP-specific money printing result with a MEMOBIRD printer in QR mode (phone: MI 10)



2.5 Receive other's free money

Free money can be received by anyone by scanning the QR code and/or reading the NFC tag. The receiver must have the **Internet connection** when receiving free money. You will receive the same money as you scan/read.



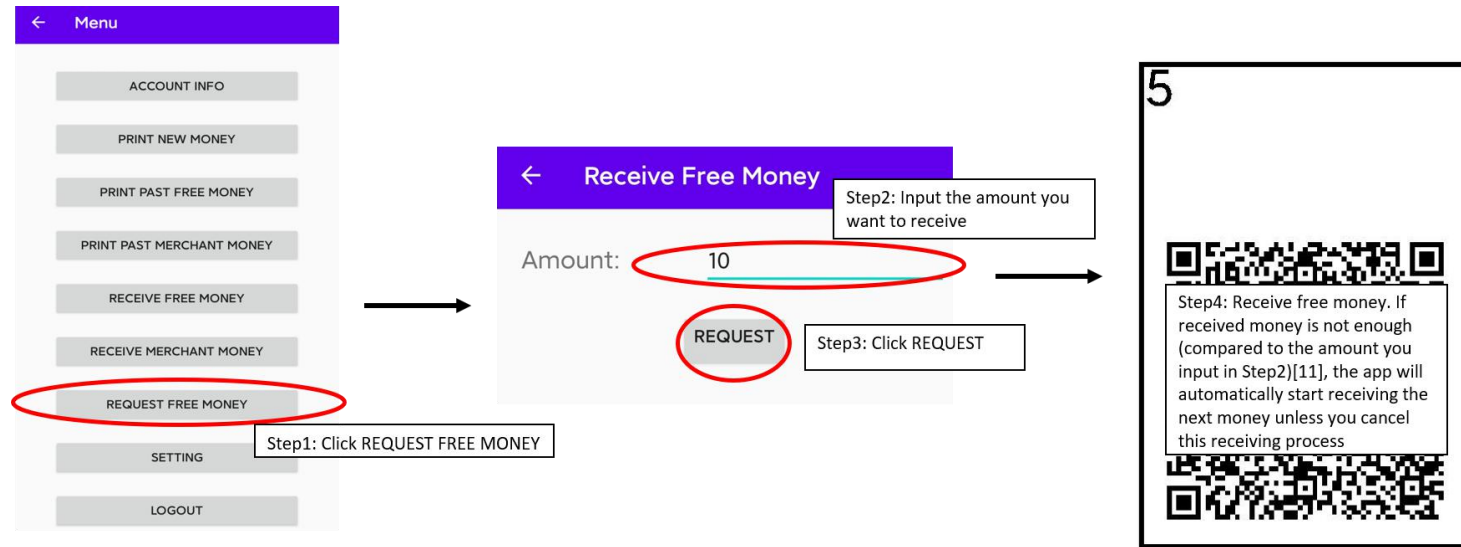
2.6 Request other's free money (for merchant)

The app considers different scenarios for a merchant requesting crypto-money. Besides general requesting process, the merchant receiver can change the amount he/she wants to request, or cancel the requesting process.

2.6.1 General requesting process

You need to input your request amount before receiving money. Similar to 2.5, you must have the Internet connection.

[10] If you try to receive the money twice, you will get a "expired token" notification

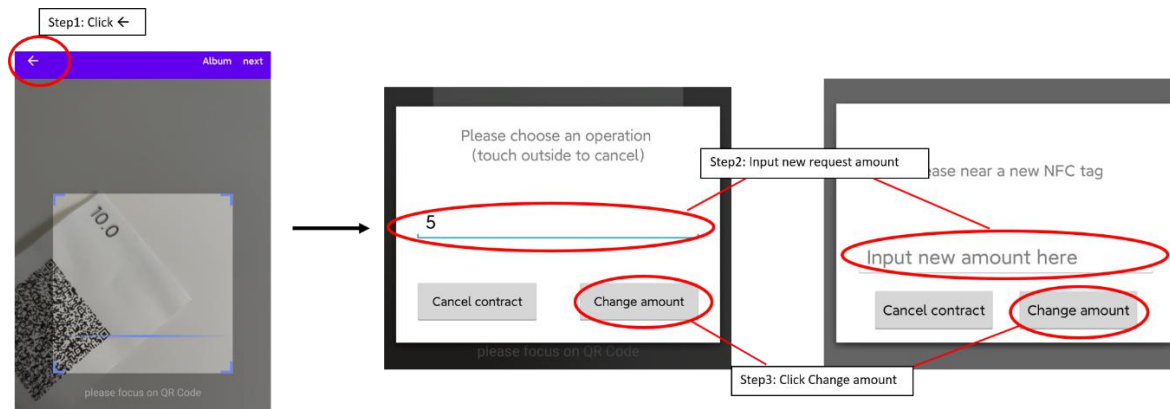


Different to 2.5, if the free money amount is larger than your request amount, you will **only get your request amount** after receiving that free money. The free money generator will get the **change back to his/her account balance**. For example, your request amount is 8.0, after receiving a 10.0 free money, your receiving process will finish and you only get 8.0. The 10.0 free money generator will get 2.0 back to his/her account balance. The 10.0 free money then gets expired.

2.6.2 Change request amount

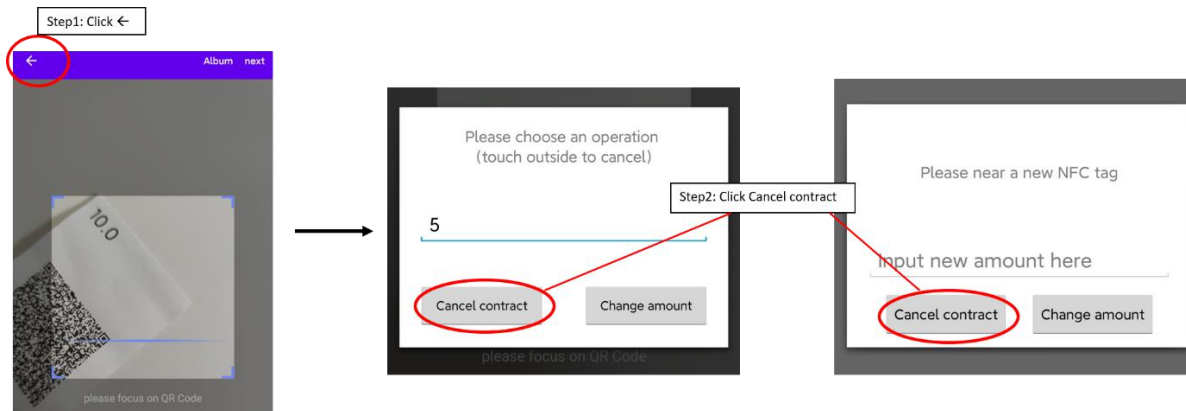
You can change the amount you want to receive during the receiving process. For example, you initially want to receive 15.0, after receiving a 5.0 free money, you can change the amount to 8.0. After receiving another 5.0 free money, your receiving process will finish and you will get 8.0. The second 5.0 free money generator, will get 2.0 free money back to his/her account balance. You can change the amount whenever scanning the QR part or reading the NFC tag.

[11] If the amount is not enough, you will get a "not enough" notification and the app will open camera again



2.6.3 Cancel requesting money

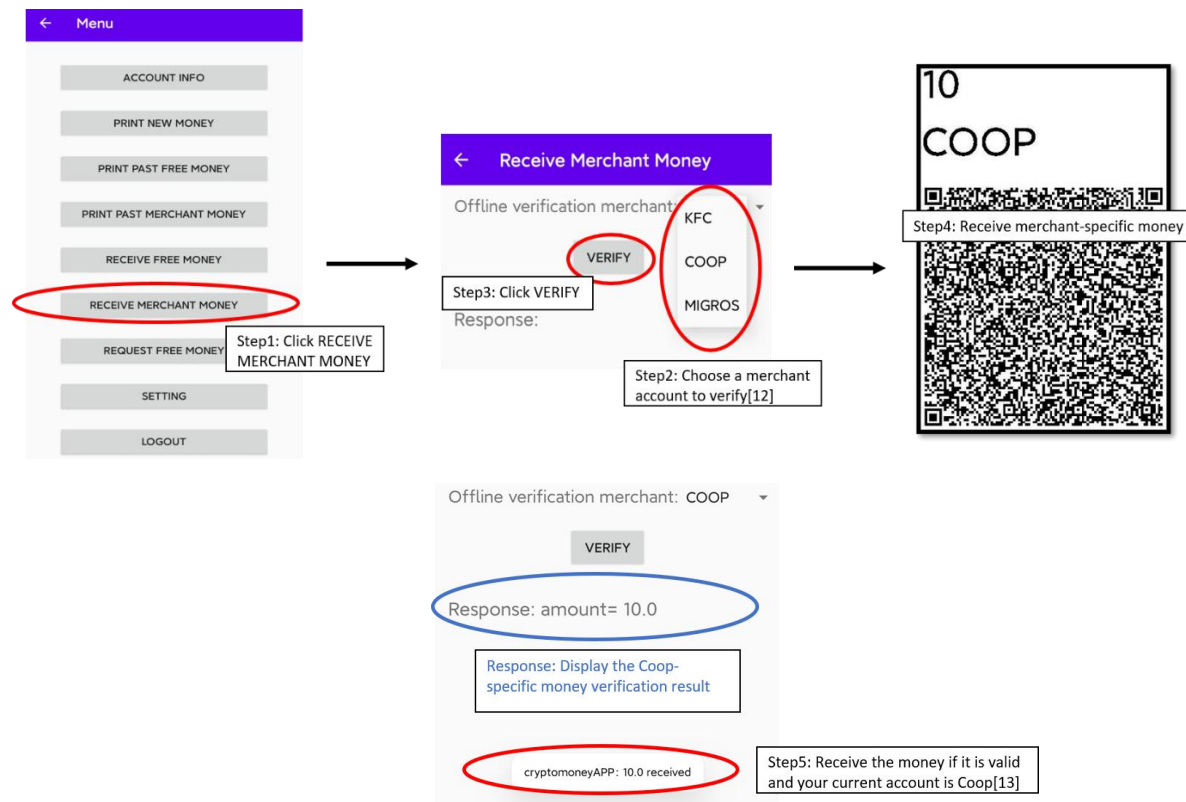
You can cancel the receiving process at any time. If you decide to cancel the transaction, you will **not receive any free money**, including the money you have received so far. The free money that has been scanned/read will get expired immediately and the amount will send back to its generator account balance. For example, Alice printed out a 5.0 free money, Bob requests Alice 10.0, After scanning Alice's 5.0 free money, Bob cancels the transaction, then Bob gets nothing and Alice gets her 5.0 back to her account.



You **cannot** stop receiving money unless you have received enough money or you click the “Cancel contract” button.

2.7 Receive other’s merchant-specific money (for merchant)

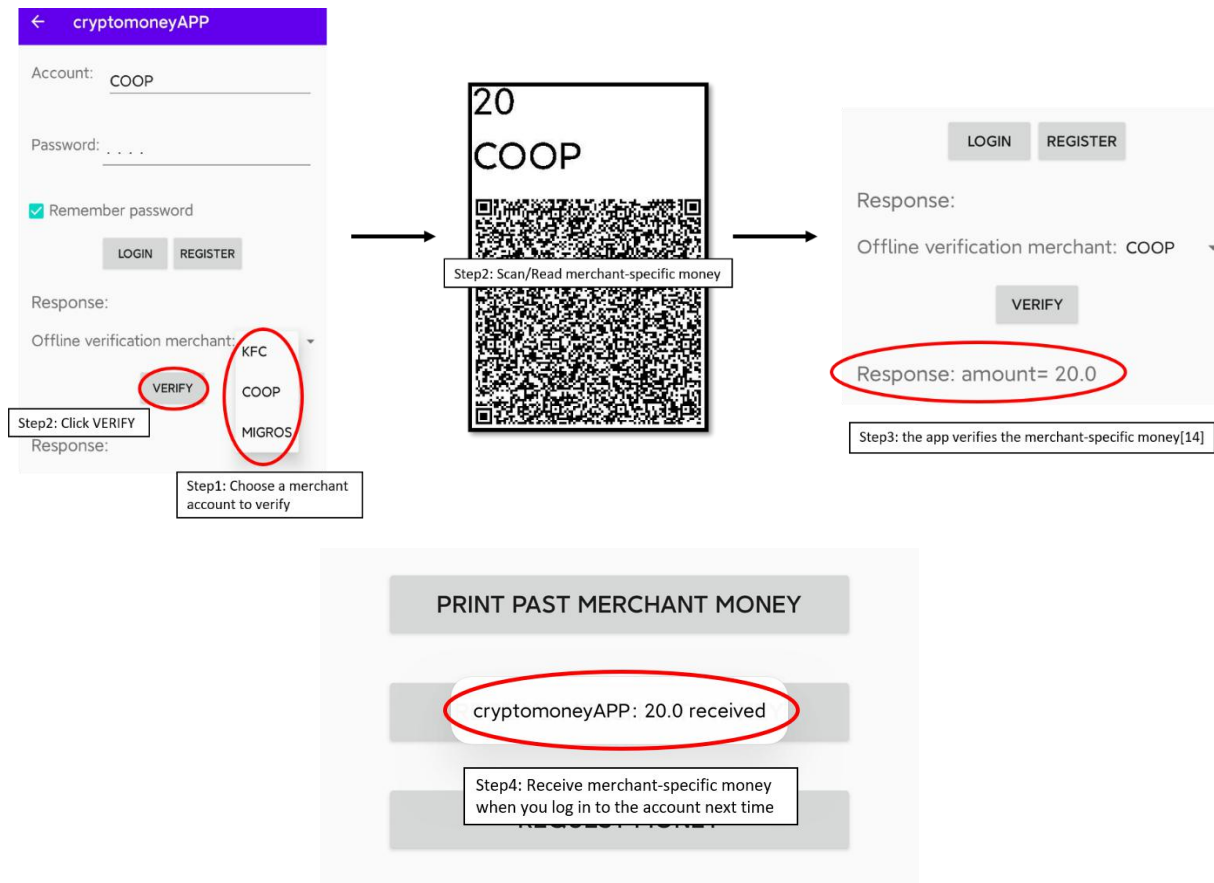
If you have a merchant account, you can verify and receive other’s merchant-specific money if you are that specific receiver.



[12] The list will only show the merchants that you were able to log in in the past, if you are a customer, the list will be empty

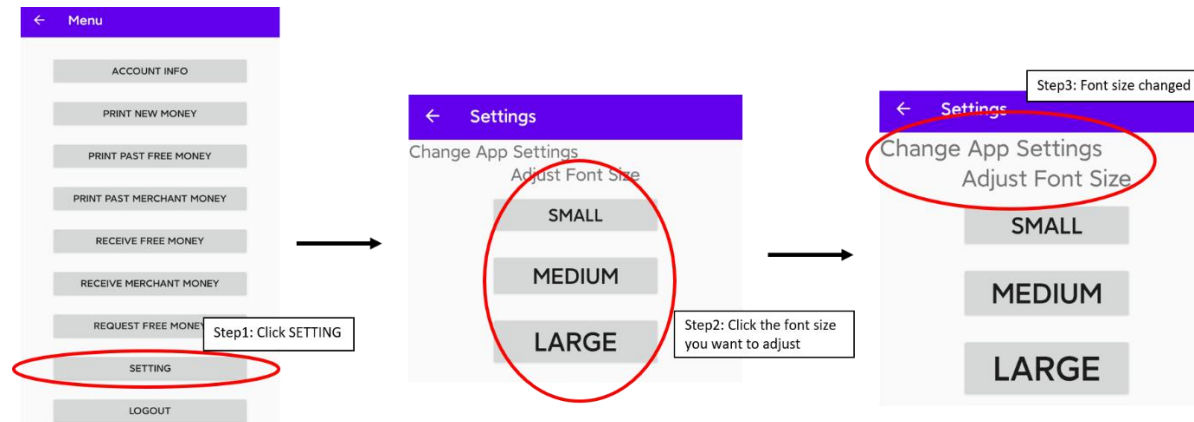
[13] You **cannot** receive this money if you are not logged in as Coop now. You will receive the money the next time you log in Coop account

You can also verify a merchant-specific money **without Internet connection**.

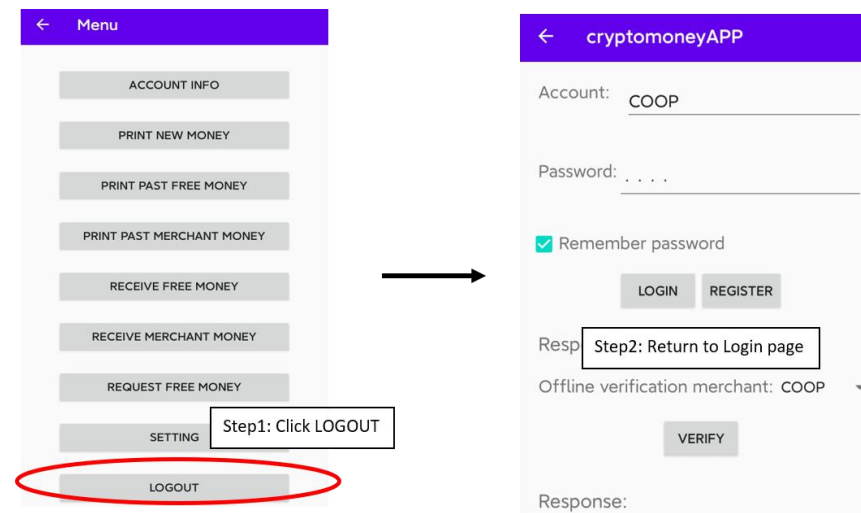


[14] The app records all the merchant-specific money you have seen, you will **know if the money is expired** (has been received by you before) even if you are offline.

2.8 Adjust font size



2.9 Log out your account



3. Website Instructions

You can also access your account through website.

Go to the following link:

<http://82.130.102.183:8080/WebServer/>

2.1 Login to your account

- ✓ If you don't have an account, you need to register one first. Account registration is only supported by App.
- ✓ Use your username and password to login
- ✓ If you need detailed instructions, you can click on the [Full User Guide](#) to access this detailed tutorial

Login To Your Account

Username:

Password:

Login

[Full User Guide](#)

2.2 View your account

- ✓ After login successfully, you can view your account details
- ✓ The web interface support two functions:
 1. create tokens with QR code only;
 2. directly transfer money to other account

Login Success

Username: User

Balance: 30.0

Email:

Cellphone: **This is your
account ID**

2

Generate QR code

Transfer Money

2.3 Transfer money to a known account

- ✓ Specify the amount and receiver's account ID. Please note that username is not account ID.
- ✓ Click transfer and an alert window will notify you if the transaction is success or not.

Transaction

Amount	<input type="text" value="10"/>
Receiver	<input type="text" value="2"/>

This must be Account ID

Transfer

82.130.102.183:8080 says
Transaction Success!

OK

2.4 Generate tokens

QR code tokens can be generated easily with 2 steps

Step1: Specify the amount of the token

Type your input in the box

Submit

Step2: Save the picture or print it out



Image Created Success: [/opt/tomcat/webapps/WebServer](#)

Generate Again Print QRcode Back