

Online Payment Security Tips

電子支付大流行
資訊安全要留神

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Agenda

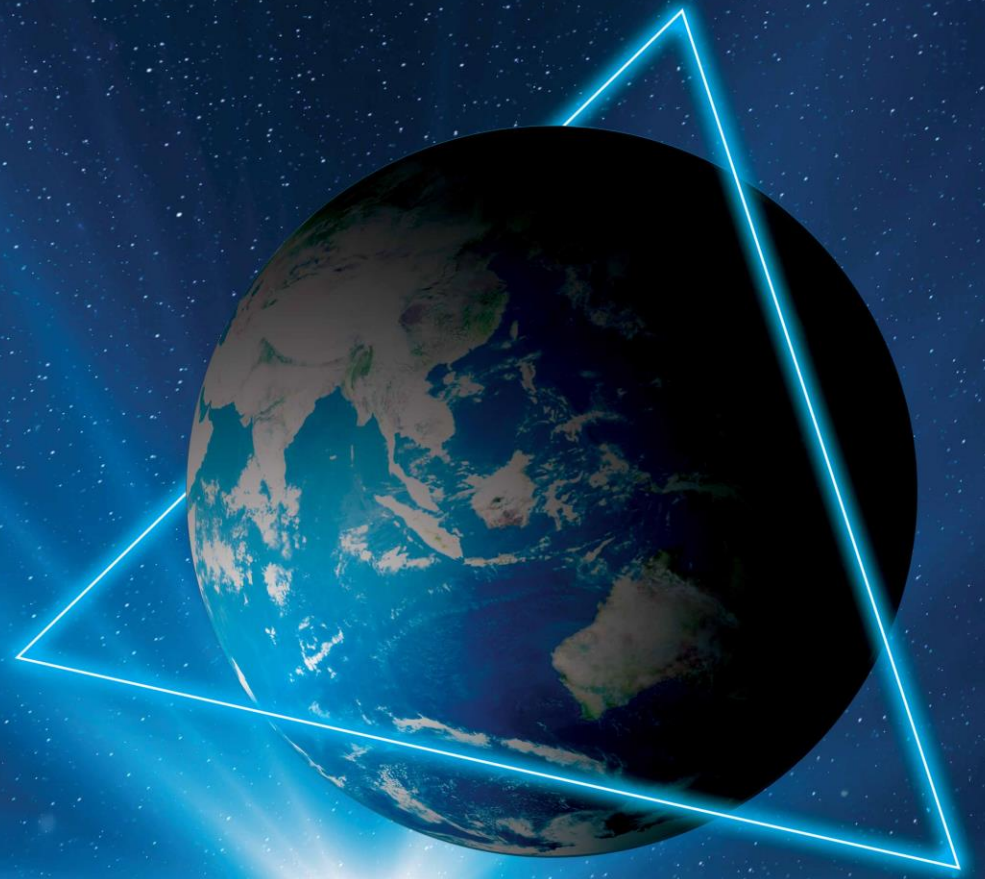
- 5G is re-shaping the future of digital payments
- Types of online payments
 - Credit cards
 - Digital Wallets (e.g. AlipayHK, PayMe, WeChat Pay HK)
 - Crypto Wallets
- Practical examples (3HK)
 - Online cryptocurrency payment for mobile phone bills
 - Payment (Digital Wallet) for e-commerce
 - Carrier Billing

 **Tips for protecting online payments**

- Common security issues of online



5G is reshaping the
future of digital
payments



5G

One World

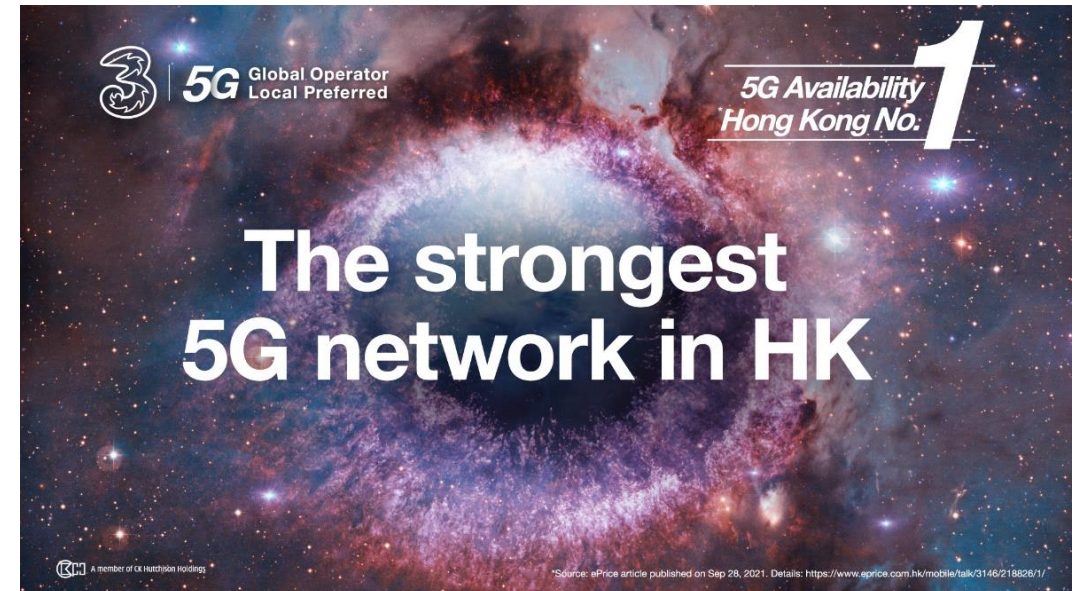
The 5G era is here



Source: Communications Authority
<https://www.5g.gov.hk/en/what-is-5g/coverage.html>

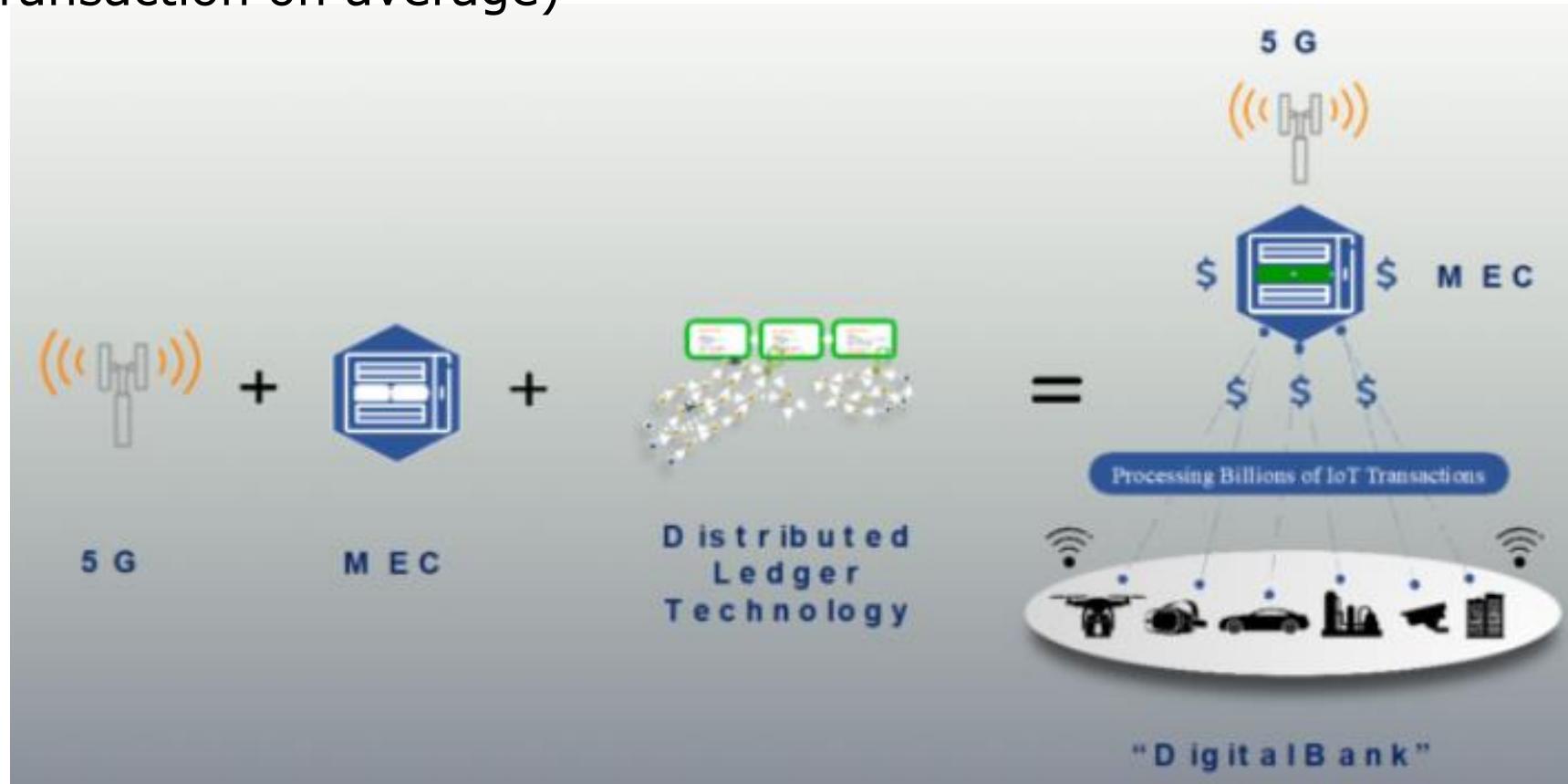
5G services were commercially launched in April 2020. In the meantime, local mobile network operators (MNOs) have been actively rolling out their 5G networks. At present, 5G coverage in Hong Kong has exceeded 90% of the population.

1G 1982	2G 1992	3G 2001	4G 2011	5G 2020
				<p>Super High Speed Massive Connectivity Ultra Low Latency</p> <ul style="list-style-type: none"> IoT devices Live broadcast AI surveillance Smart retail Smart property Smart vehicle and many more.. <p>Network Slicing</p> <ul style="list-style-type: none"> IoT business Internet & Contents Mission-critical applications <p>Multi-access Edge Computing</p> <p>MEC</p>
 Up to 2.4kbps	 Up to 1Mbps	 Up to 21Mbps	 Up to 1Gbps	 Up to 20Gbps



5G is re-shaping the future of digital payments

- Provide connected devices with a digital wallet (similar to bank account for customers)
- Process billions of real-time transactions through 5G applications
- Offer competitive transaction fees (payment processors usually charge 3% + \$0.10/transaction on average)

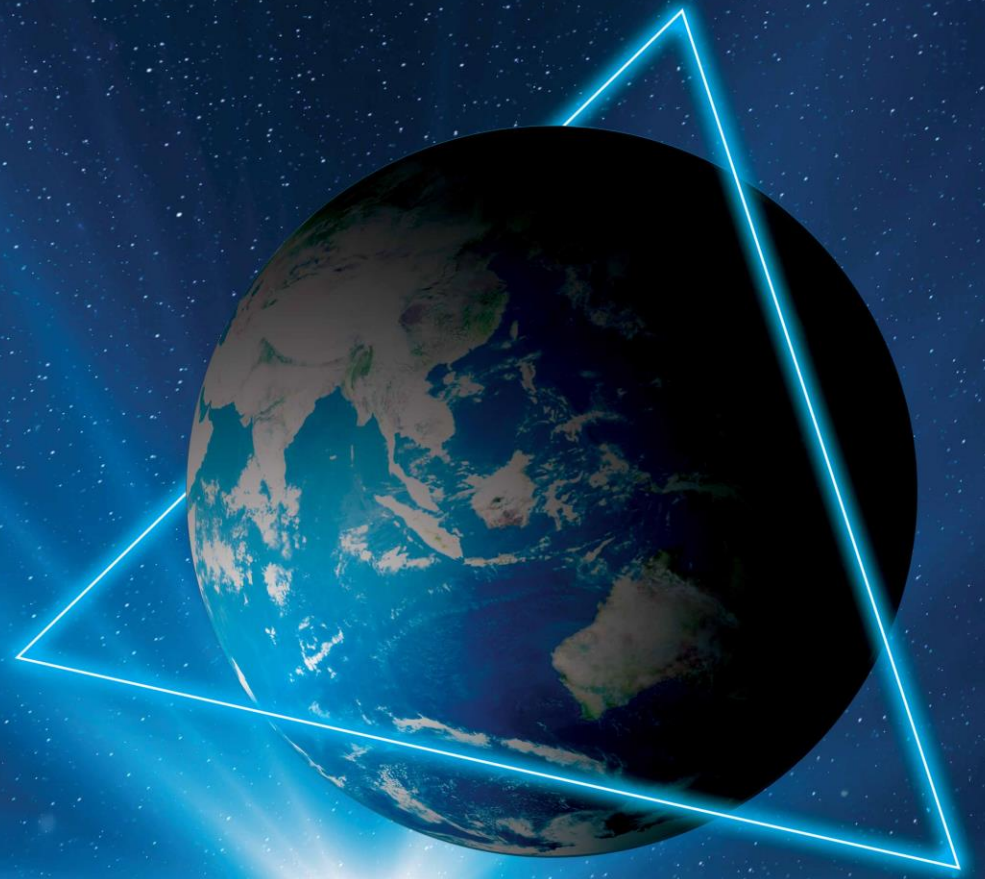


How to measure a trusted service provider



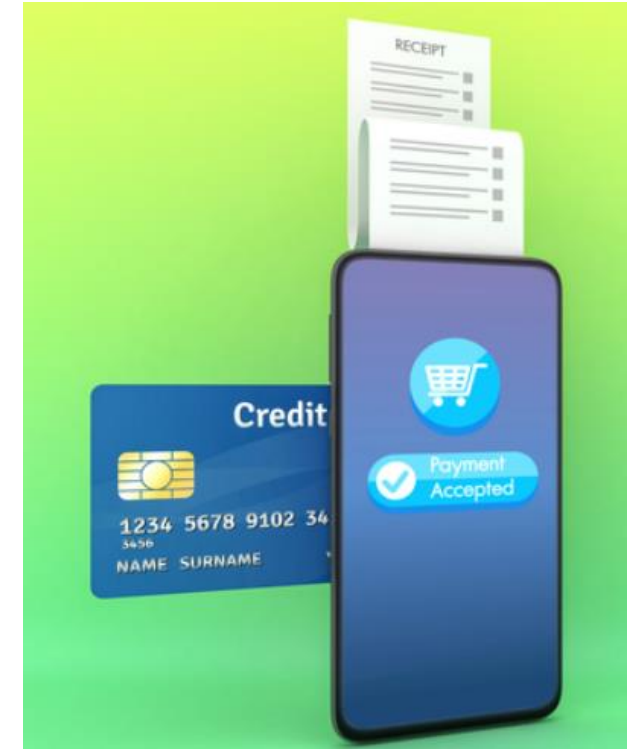
- Is your service provider using any professional Security Operation C
- Has your service provider deployed any cybersecurity standard or fr
- Has your service provider invested in any cybersecurity tools and 7er

Types of Online Payments



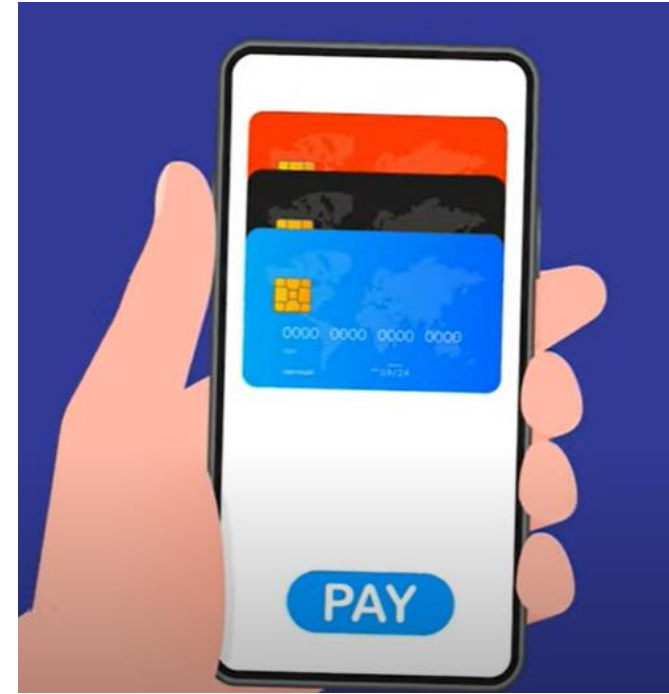
Credit Cards

- Physical or virtual
- Customers to enter card information for online payment
- Multi-factor authentication (MFA) such as one-time password (OTP) through SMS
- SMS/Email notification upon transaction completion



Digital Wallets (e.g. AlipayHK, PayMe, WeChat Pay, etc)

- Electronic form of money
- Select a desirable digital wallet during checkout
- Redirect customers to the app provided by digital wallet
- Enter pre-defined PIN to confirm transaction
- SMS/Email notification upon transaction completion



Crypto wallets

- A cryptocurrency, a fungible token, is a store of value or a utility token
- High variety of face-value of the “Money”
- “Money” can be earned by crypto-mining
- Payment workflow like digital wallets




Currency	Average rate	Exchange (24h)
1 Bitcoin (BTC)	42 128.00 USD	-1.63%
2 Ethereum (ETH)	3 176.58 USD	-2.59%
3 Tether (USDT)	1.00 USD	-0.02%
4 BNB (BNB)	413.32 USD	-3.26%

Noted: Reference price as of 11 Apr 2022

A large telescope on a tripod stands on a dark, rocky surface. A bright red triangle is superimposed over the scene, with one vertex at the top left, another at the bottom left, and the third on the right side. The background is a dramatic sky with a sunset or sunrise glow on the left and a starry night sky on the right.

Practical Examples (3HK)

A large telescope on a tripod stands on a dark, rocky surface, possibly a moon or planet. The background is a dramatic sky with a sunset or sunrise on the left, transitioning into a starry night sky with a visible galaxy on the right. A glowing red triangle is superimposed over the scene, with one vertex at the top left, another at the bottom left, and the third pointing towards the right, framing the telescope and the text.

Online Cryptocurrency Payment for Mobile Phone Bills



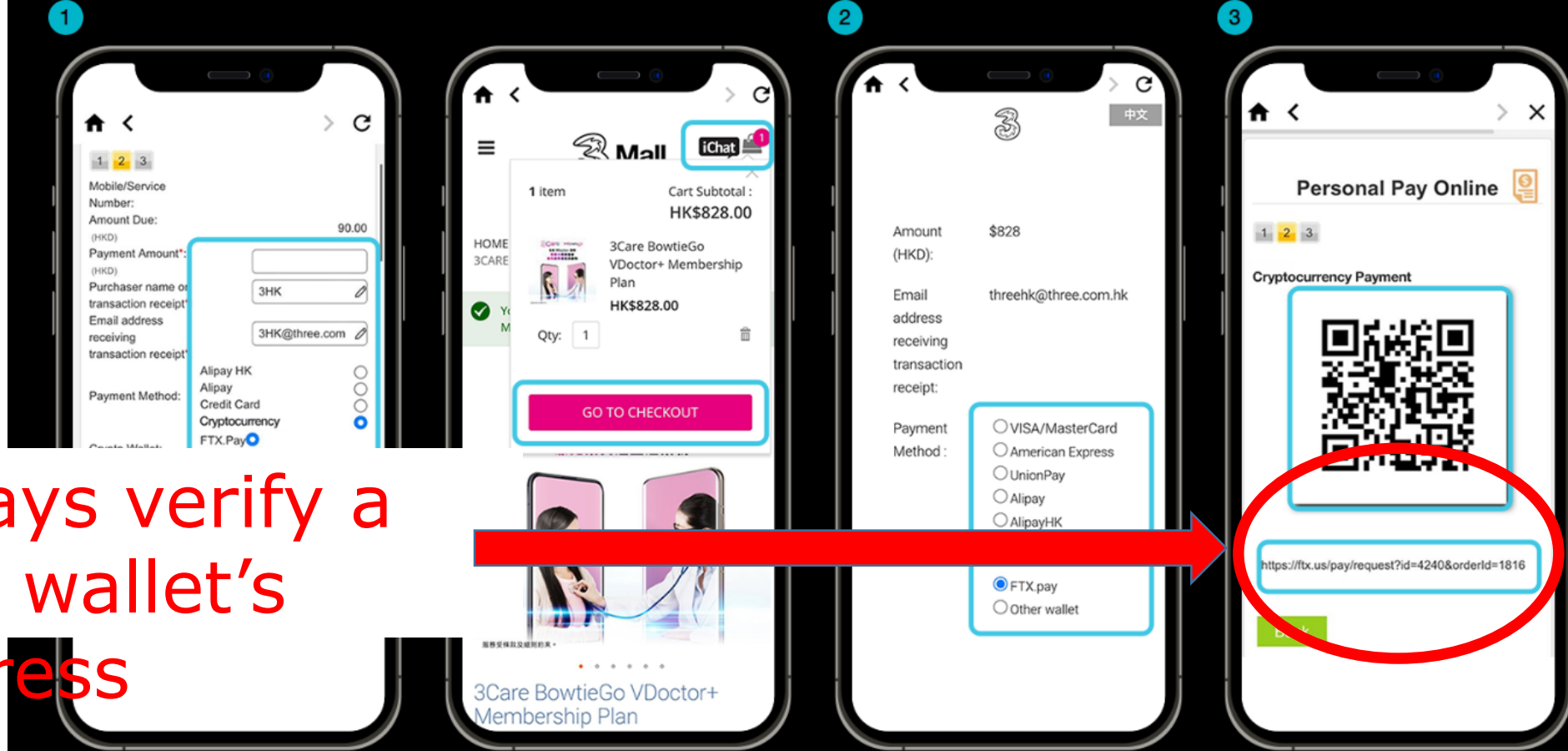
5G

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Pay directly from FTX



Always verify a
web wallet's
address



Pay monthly bill:

- > Login at My3 App.
- > Choose "Account details & Service Plan" and select "Pay your bill".
- > At page of personal pay online, choose "cryptocurrency" as payment method.

Shop at 3Mall:

- > Choose the selected products at 3Mall.
- > Put the products into the cart.
- > Choose "Go to checkout".
- > Input the related details and submit the order.

> On the payment page, select "cryptocurrency" and then "FTX Pay".

> A QR code or a payment link will be displayed.

- > Login with desktop: Scan the QR Code with mobile phone and FTX Pay app will be opened automatically.
- > Login with mobile phone: Copy the link to browser and FTX Pay app will be opened automatically.



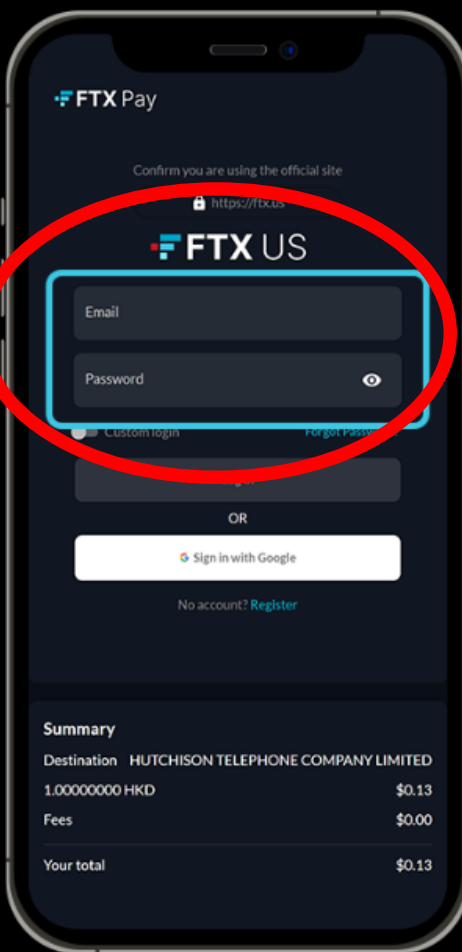
Write down a mnemonic phrase for password recovery



Use a hardware wallet for extra protection



4



FTX Pay

Confirm you are using the official site

https://ftx.us

FTX US

Email

Password

Custom login

Forgot Password

OR

Sign in with Google

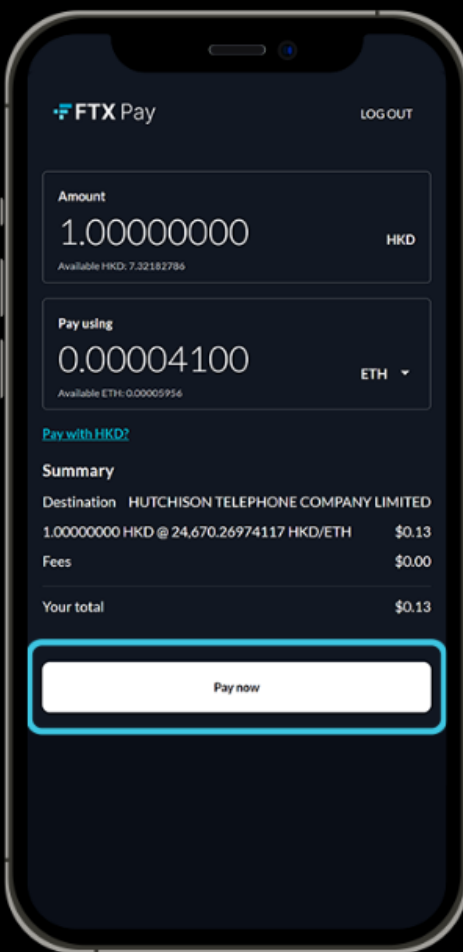
No account? Register

Summary

Destination	HUTCHISON TELEPHONE COMPANY LIMITED
1.00000000 HKD	\$0.13
Fees	\$0.00
Your total	\$0.13

> Login to your account after opening the FTX Pay app.

5



FTX Pay

LOG OUT

Amount

1.00000000 HKD

Available HKD: 7.32182786

Pay using

0.00004100 ETH

Available ETH: 0.00005956

Pay with HKD?

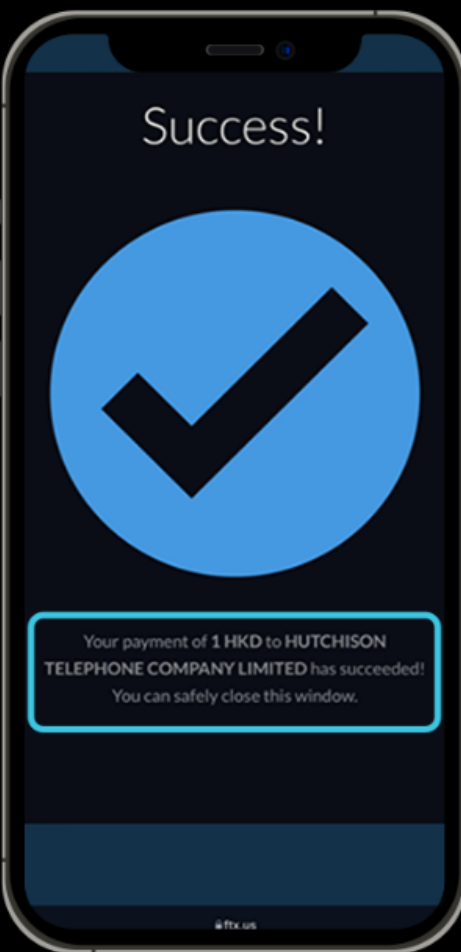
Summary

Destination	HUTCHISON TELEPHONE COMPANY LIMITED
1.00000000 HKD @ 24,670.26974117 HKD/ETH	\$0.13
Fees	\$0.00
Your total	\$0.13

Pay now

> FTX Pay app will show the details of your transaction. Confirm the amount of your transaction and select "Pay now".

6



Success!

Your payment of 1 HKD to HUTCHISON TELEPHONE COMPANY LIMITED has succeeded!
You can safely close this window.

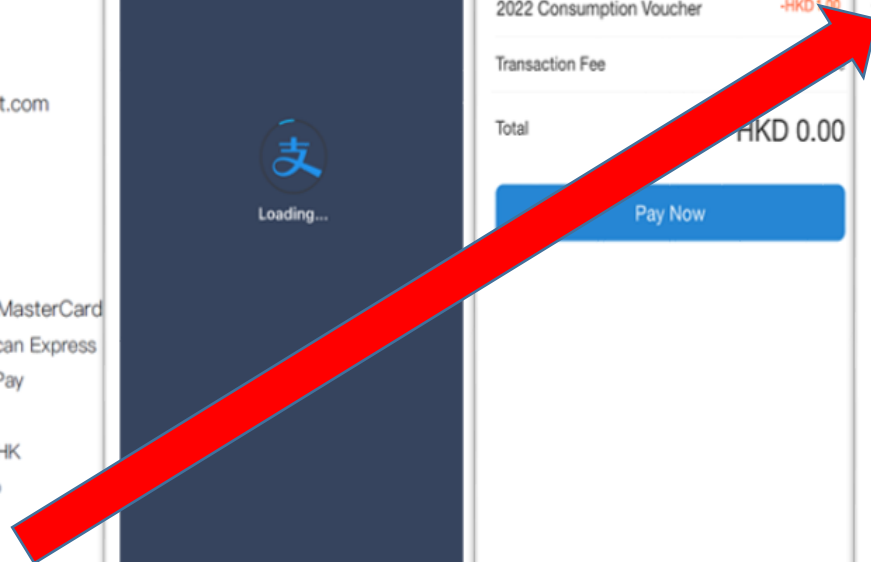
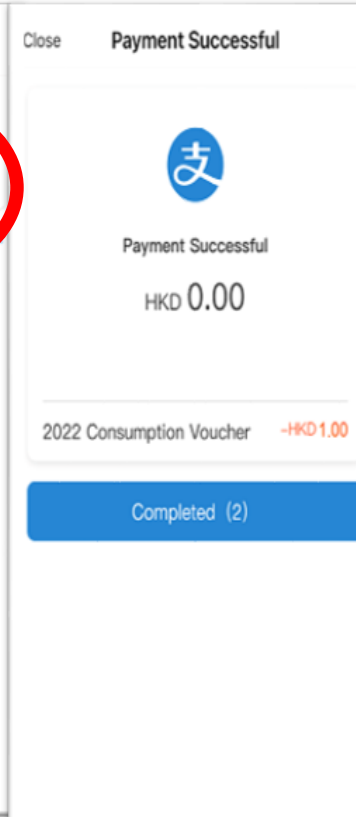
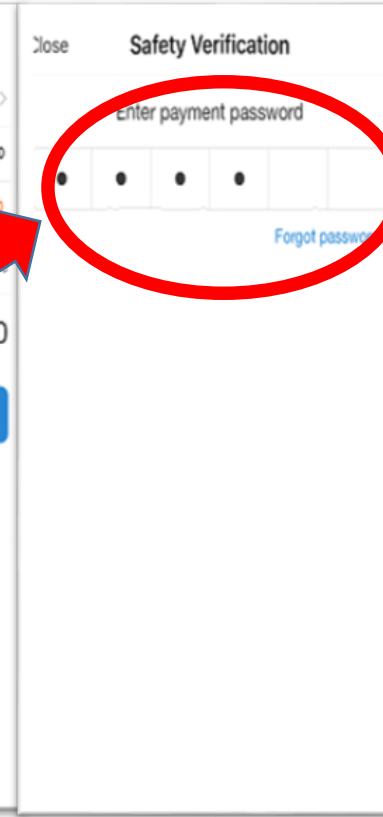
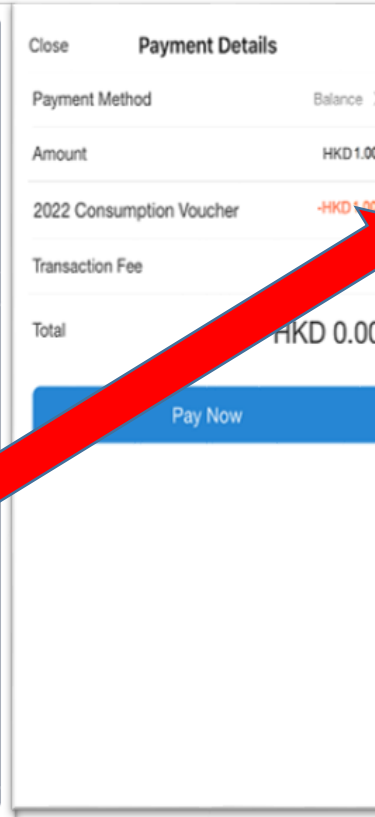
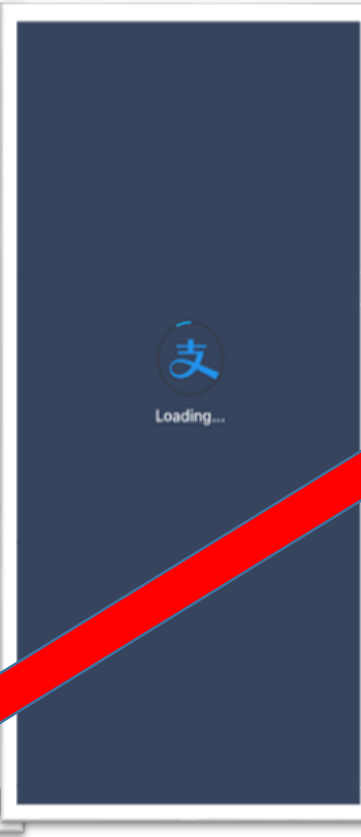
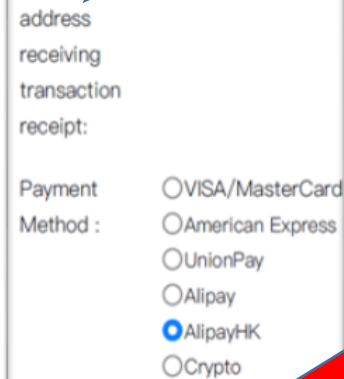
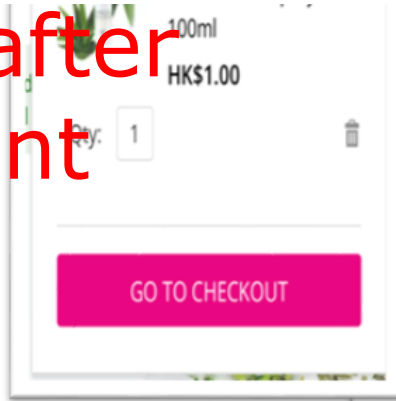
> Payment successful.

A large telescope on a tripod stands on a dark, rocky surface, possibly a moon or a desert. The background is a dramatic sky with a sunset or sunrise on the left, transitioning into a starry night sky with a visible galaxy on the right. A glowing red triangle is superimposed over the scene, with one vertex at the top left, another at the bottom left, and the third pointing towards the right, framing the telescope and the text.

Payment (Digital Wallet) for e-Commerce



Remember to
check
confirmation
email after
payment



Enter your PIN
securely

Carrier Billing



5G

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Carrier Billing



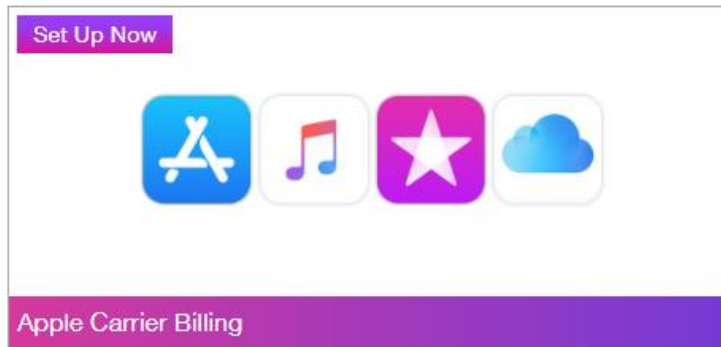
Safe Purchases



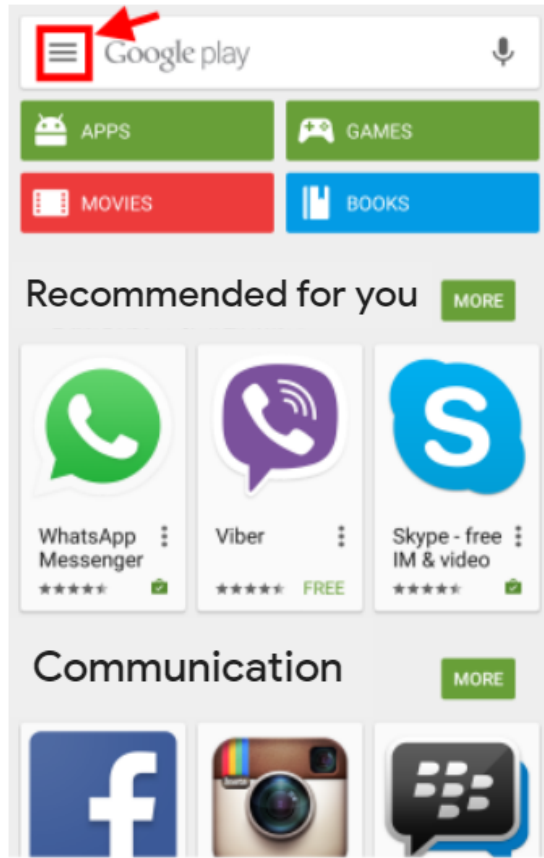
Easy Setup



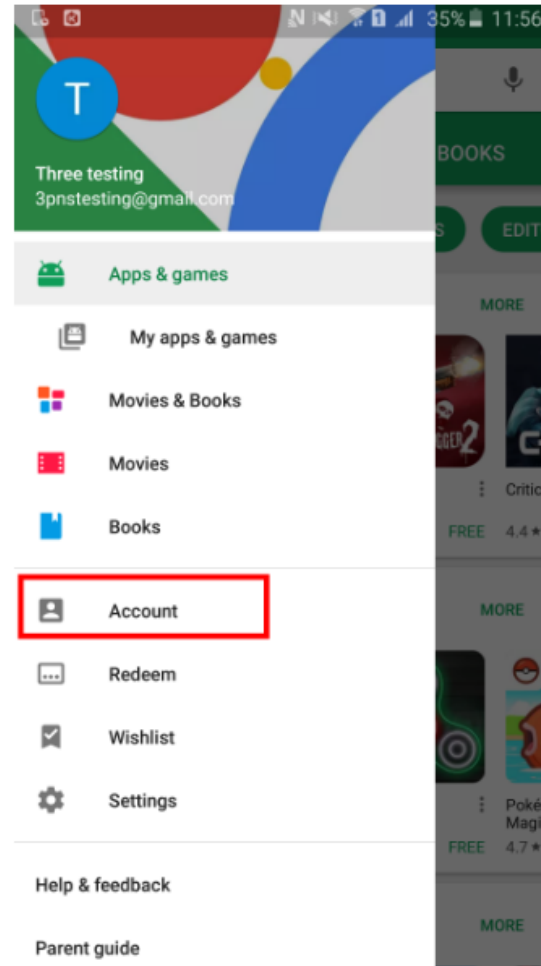
Clear Transaction



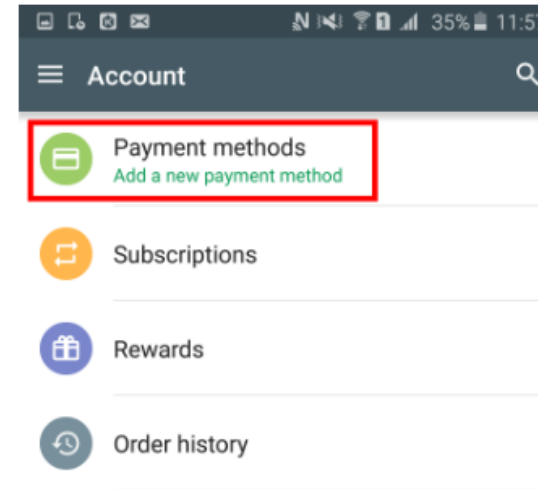
Set up Carrier Billing



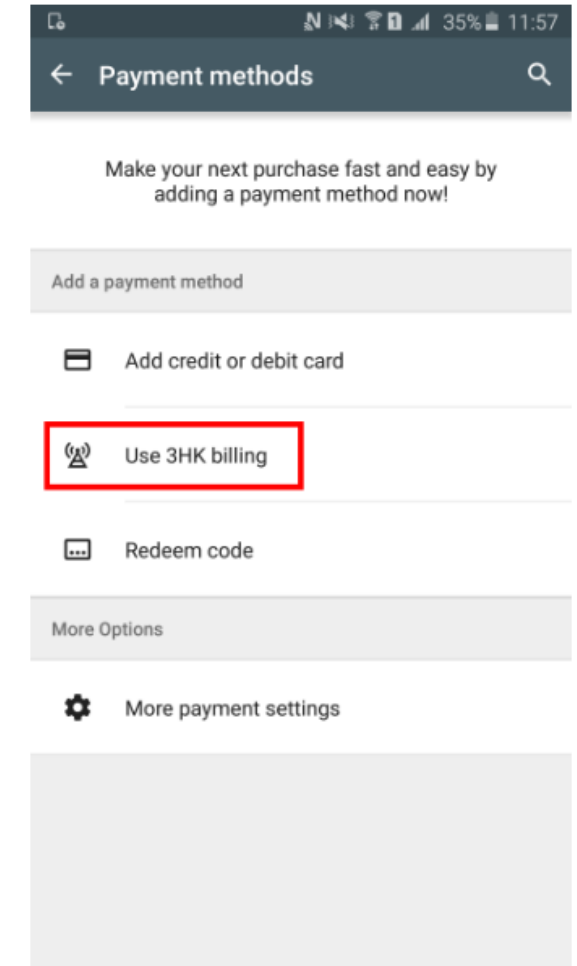
1 Press the left top to open menu bar



2 Select "Account"

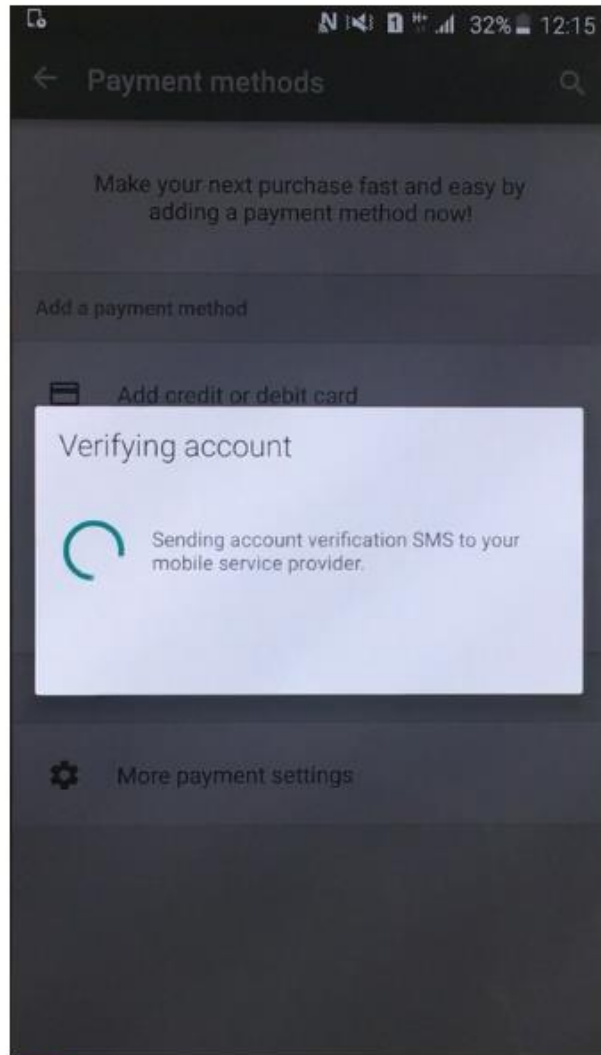


3 Select "Payment methods"

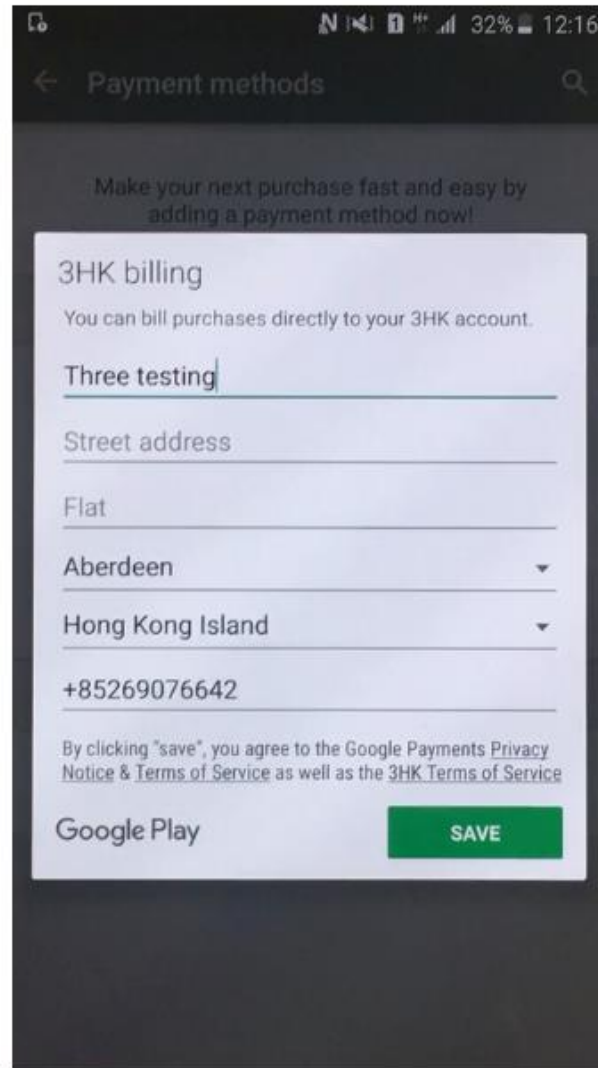


4 Turn off the Wi-Fi to use the mobile data and select "Use 3HK billing"

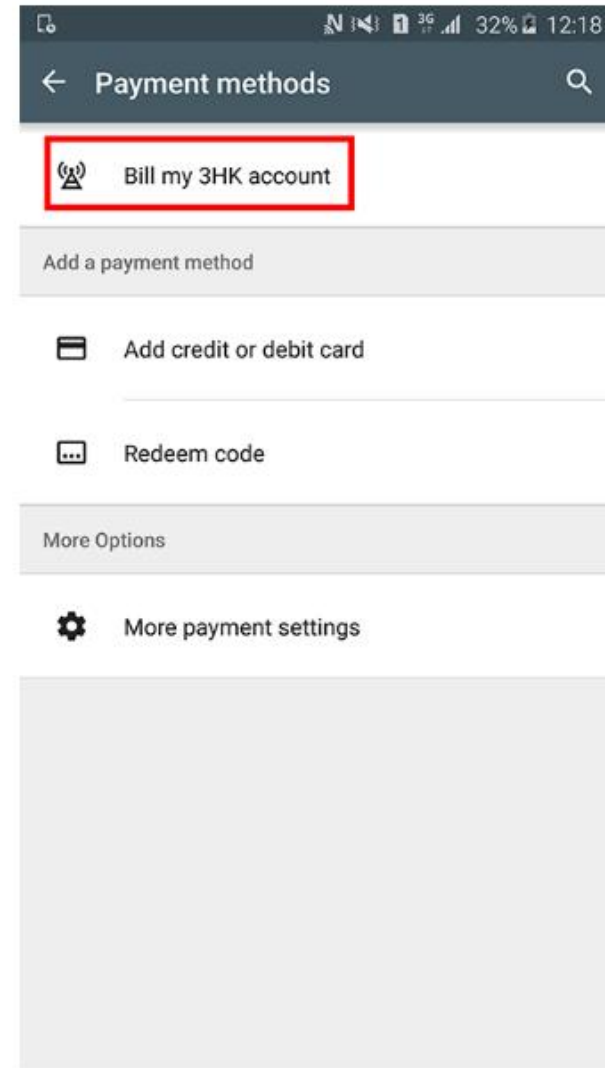
Set up Carrier Billing (cont.)



5 Account verification

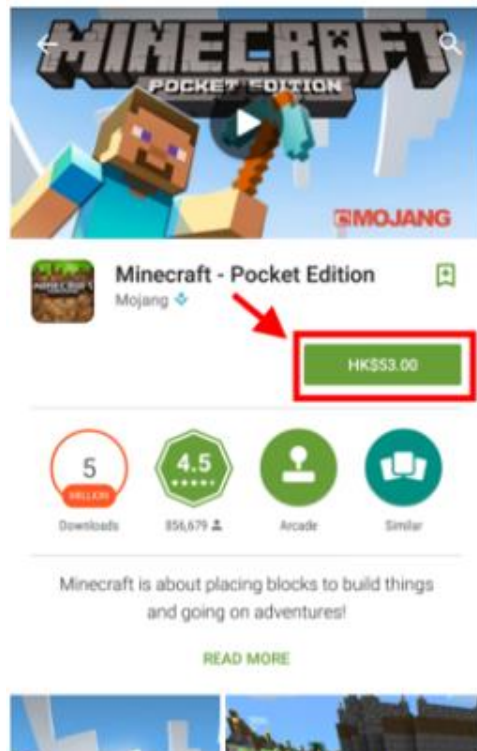


6 Fill in the account details and click "Save" to agree the service T&C



7 3HK billing is now ready to use

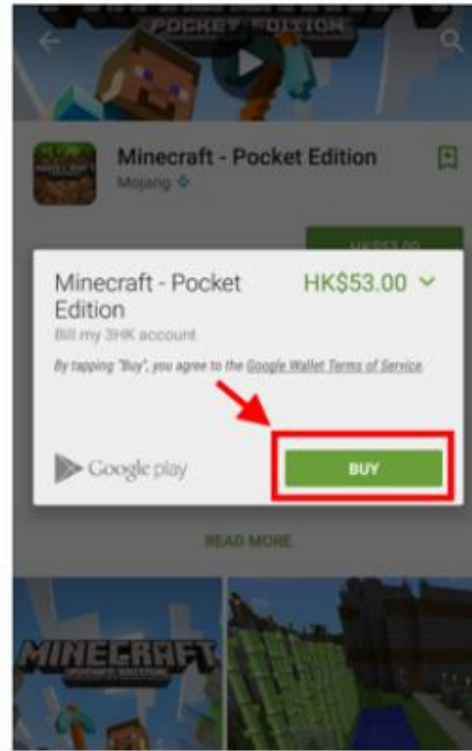
How to pay via carrier billing



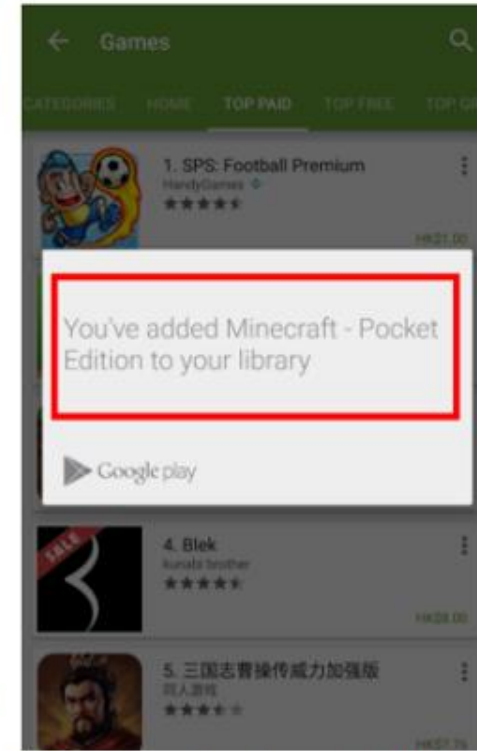
1 Select the content and click the price



2 Accept the app requirement



3 Click "Buy" to proceed



4 Succeed the purchase by 3HK payment



5 Install and enjoy your content

Security Tips for Online Payments



5G

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Common security issues of online payments

- Phishing emails
- Fake websites
- Payment gateway / application being compromised

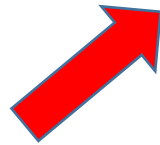


Tips for protecting online payments

- Don't click on any link or open any email if you are not sure about where they come from and their true identity



Ask yourself:
Do you have any
business contact
with this
organisation?
Is the link really
reaching the
genuine website?



Your account has been limited.

Hello, Customer

We've limited your account

After a recent review of your account activity, we've determined you are in violation of PayPal's Acceptable Use Policy. Please log in to confirm your identity and review all your recent activity

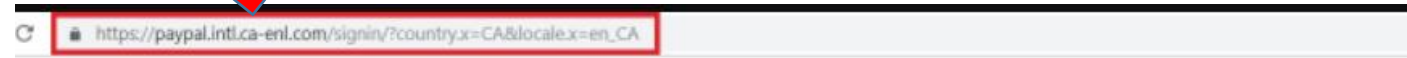
You can find the complete PayPal Acceptable Use Policy by clicking Legal at the bottom of any PayPal page.



Tips for protecting online payments

- Verify the payment web/link before entering any information

"https://paypal.intl.ca-enl.com/signin/?country.x=CA&locale.x=en_CA"



FAKE

A screenshot of the official PayPal login page. It features the PayPal logo at the top. Below it is a text input field labeled "Email". Underneath the field is a blue button labeled "Next". Below the button is a link that says "Having trouble logging in?". Below this is a horizontal line with the word "or" in the center. At the bottom is a grey button labeled "Sign Up".

Tips for protecting online payments

- Always have the system patch updated and the anti-virus signature in-place

CVE-ID	
CVE-2021-30883	Learn more at National Vulnerability Database (NVD) • CVSS Severity Rating • Fix Information • Vulnerable Software Versions • SCAP Mappings • CPE Information
Description	
A memory corruption issue was addressed with improved memory handling. This issue is fixed in iOS 15.0.2 and iPadOS 15.0.2, macOS Monterey 12.0.1, iOS 14.8.1 and iPadOS 14.8.1, tvOS 15.1, watchOS 8.1, macOS Big Sur 11.6.1. An application may be able to execute arbitrary code with kernel privileges. Apple is aware of a report that this issue may have been actively exploited..	

- Make sure that the transaction confirmation from the merchant is well received

Payment notification

A payment was submitted to [REDACTED] It will be reflected in your bank account within 1-2 business days.

Payment information

Name: [REDACTED]

Total amount: \$10,000.00

Allocation:

Invoice: #1000

Amount: \$2,500.00

Invoice: #1200

Amount: \$7,500.00

Card: Visa ending in 4242

Date: Mar 18, 2019, 11:22pm UTC

Authorization code:

Thank you

