

Economy Pillar1A-1: Money Evolution → Bitcoin – Page 28 onwards



Commodity Money

Metallic Money

Paper Money

Bank Money,
digital payment

Crypto
Currency
blockchain



Cryptocurrency: 3 ways to obtain?



Cryptocurrency is dangerous

- RBI & India Govt's stand?

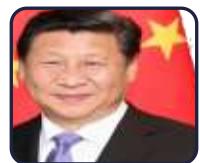


Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



China's CBDC, India Budget



NFT

3 Ways to Obtain BITCOIN (बिटकोइन हाँसील करने के तीन तरीके)



1) Mining



2) Sell goods / services to miner

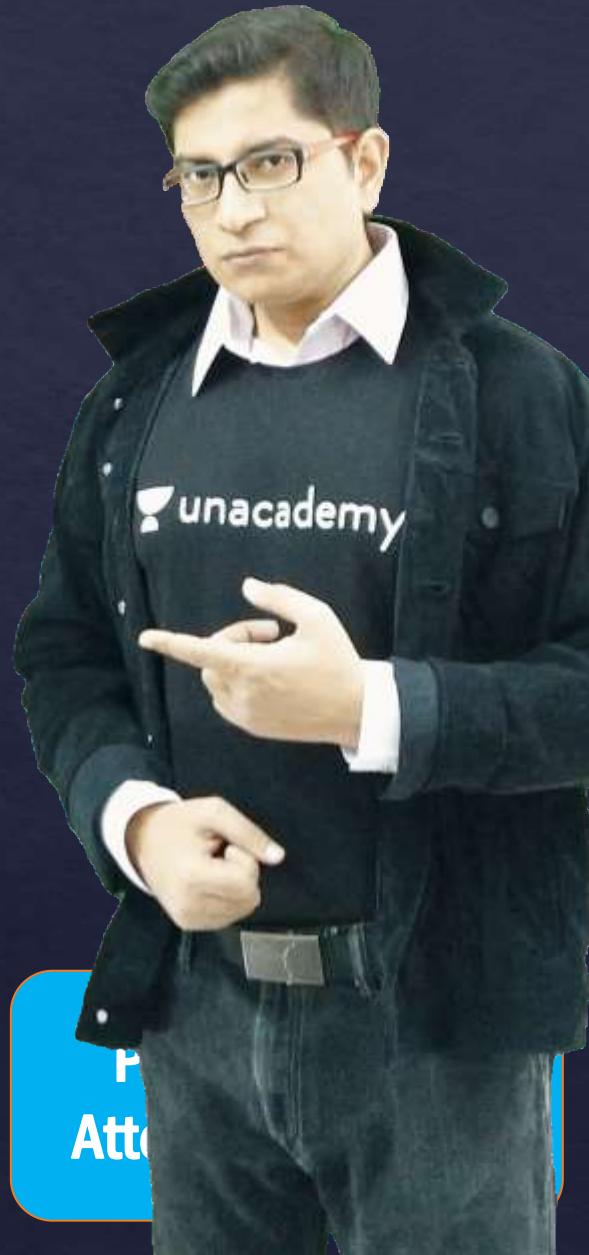


3) Exchange with legal tender.

Consider the following statements: (SetA-Q79)

1. National Payments Corporation of India (NPCI) helps in promoting the financial inclusion in the country. एनपीसीआई संस्था वित्तीय समावेशन में मदद करता है
 2. NPCI has launched RuPay, a card payment scheme. एनपीसीआई संस्था ने रुपए कार्ड भुगतान योजना जारी की है

Which of the statements is/are correct?



100% Surety

50:50

Skip

P
Atte



Financial inclusion

= poor people

have easy access
to Banking /loan

/insurance
/pension etc
services

29. Consider the following statements:

1. National Payments Corporation of India (NPCI) helps in promoting the financial inclusion in the country. helps increasing access to banking
 2. NPCI has launched RuPay, a card payment scheme.

Which of the statements is/are correct?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2



If incorrect asked then..

100% Surety

50:50

Skip



In every prelims, 30-40 Qs are very easy, if you revise routine things. But people tend to spend 90% of their time only on the 10 unsolvable tough Qs only.

Consider the following statements: (SetA-Q79)

1. National Payments Corporation of India (NPCi) helps in promoting the financial inclusion in the country. एनपीसीआई संस्था वित्तीय समावेशन में मदद करता है
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Which of the statements is/are correct?

100% Surety

50:50

Skip



- MCQ is in general context about what Rupay is? सामान्य परिपेक्ष मैं पूछा गया है
 -  UPSC not conducting exam for SC-PIL-Lawyer-recruitment. की आपको बाल की खाल, और हर शब्द का तकनीकी मतलब निकालना पड़े
 - Official Answer key SetA-Q79 Ans: C



- 1) But Rupay is not a 'scheme', वो योजना नहीं है
 - Rupay is a gateway
 - so #2 is WRONG



Q. Most likely consequence of implementing the ‘Unified Payments Interface (UPI)’?

- A. Digital currency will totally replace the physical currency in about two decades.** अगले दो दशकों में डिजिटल मुद्रा संपूर्ण रूप से कागजी मुद्रा को हटा देगी
- B. Foreign Direct Investment (FDI) inflows will drastically increase.** विदेशी प्रत्यक्ष निवेश मैं बहुत ज्यादा बढ़ोतरी होगी
- C. Direct transfer of subsidies to poor people will become very effective.** गरीबों को सब्सिडी का सीधा लाभ देना बहुत ही ज्यादा असरदार हो जाएगा
- D. Mobile wallets will not be necessary for online payments.** मोबाइल बटवे की ज़रूरत नहीं होगी ऑनलाइन भुगतान के लिए



यह यूपीआई टेक्नोलॉजी
अपनाने से
क्या परिणाम मिलेगा

100% Surety

50:50

Skip

Atte

Current Account

Savings Account

Bank deposit account

NonUPI type of Apps

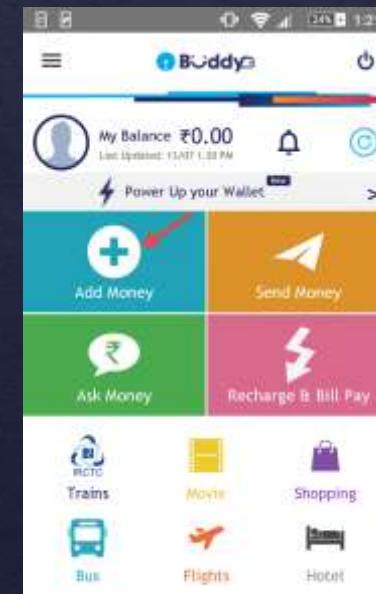


First stored in a
digital wallet

transferred to seller

If you want to return your own money from
wallet to your bank account: % fees.

UPI based Apps



Money stays in
deposit account,
continues to earn
% interest.

Directly transferred to seller

Q. Most likely consequence of implementing the ‘Unified Payments Interface (UPI)’?

A. Digital currency will **totally replace** the physical currency in about two decades.

Hyperbole, अतिशयोक्ति

B. FDI inflows **will drastically increase**.

Birbal ki khichdi

C. Direct transfer of subsidies to poor people will become **very effective**.

Requires Adhar bank linkage

D. Mobile wallets **will not be necessary for online payments**.

Yes, because directly bank2bank transfer through app, money not stored in ‘e-wallet’.

100% Surety

50:50

Skip



Phonepe now allows direct linking of bank accounts. So ‘money not stored in wallet’.



1. **Gradually private Apps makers adopting UPI-technology.** So they offer both facilities

1. A) store in wallet
2. B) direct pay from bank

2. So ‘features’ keep changing.

3. We’ve to look at ‘general’ statement and not ‘exceptional’ cases. UPSC MCQs framed on generalized statement. सामान्य रूप से माहौल क्या है उसे देखना है. अपवाद रूप केस में क्या हुआ या क्या कर सकते हैं उसमें बाल की खाल खींचने मत बैठो.

4. go by elimination method.

Q. Most likely consequence of implementing the ‘Unified Payments Interface (UPI)’?

- A. Digital currency will **totally replace** the physical currency in about two decades. Hyperbole, अतिशयोक्ति
- B. FDI inflows **will drastically increase**. Birbal ki khichdi
- C. Direct transfer of subsidies to poor people will become **very effective**. Separate tech: AEPS.
- D. Mobile wallets **will not be necessary** for online payments. Yes, because directly bank2bank transfer through app, money not stored in ‘e-wallet’.



100% Surety

50:50

Skip

Atte

Find correct statements about BHIM app .

1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account. भीम ऐप द्वारा किसी के भी यूपीआई सुविधा वाले बैंक खाते में पैसा भेज सकते हैं
 2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication. डेबिट कार्ड में प्रामाणिकीकरण के चार चरण होते हैं जबकि भीम में मात्र 2 चरण होते

Which of the statements given above is/are correct?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

- I've not taught second statement yet
- so you can either attempt / skip.
(because real UPSC exam MCQs may be random like that). मैंने नहीं पढ़ाया। फिर भी दृश्य करो क्या लगता है आपको

100% Surety

50:50

Skip

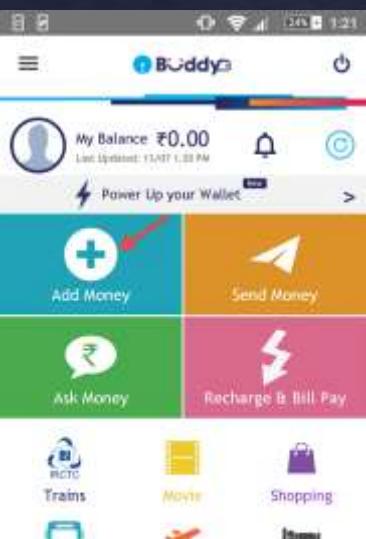
P
Atte

What is UPI-enabled bank account?

◆ by default, Your bank account is not linked with UPI.

◆ You've to give some online/offline application/authorization to bank, “please allow UPI-based apps to access my bank-account”.

◆ That is ‘UPI-enabled account.’



- बिना आपकी अनुमति सके **day#1** से **UPI-सुविधा** आपके बैंक खाते में **link** नहीं होती।
- आपने अपने बैंक को **online/offline** फॉर्म भर के अनुमति देनी पड़ती है
“UPI-वाला App मेरे खाते को access करें तो मुझे ऐतराज नहीं है”



50% chance +2 marks; 50% chance you loose -0.66 marks.

With reference to digital payments, consider the following statements:(Asked in UPSC-Pre-2018)

1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account.
 2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication.

Technical factoid, I've not taught you this YET.

Which of the statements given above is/are correct?

- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2



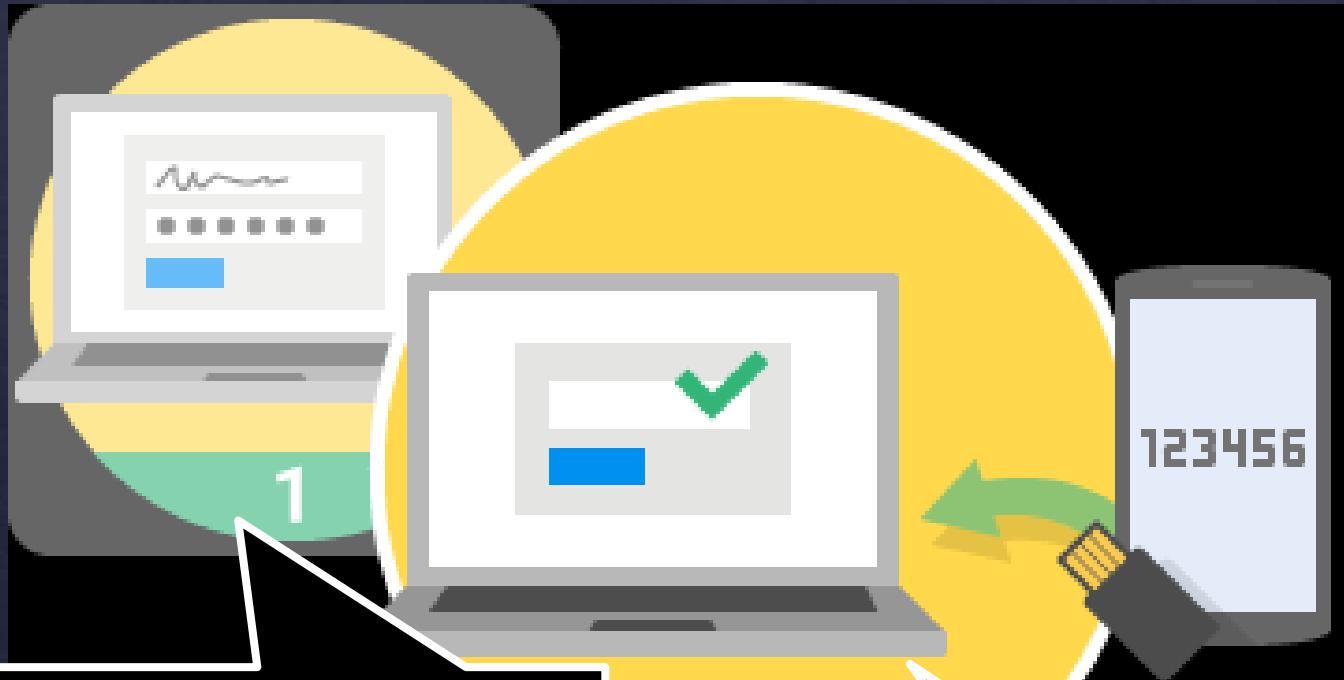
Probability of a coin toss: head (correct ans), tail (wrong ans)



Q	coin toss to decide two option	Score
Q1	wrong ans	-0.66
Q2	wrong ans	-0.66
Q3	right ans	2
Q4	right ans	2
Q5	wrong ans	-0.66
Q6	wrong ans	-0.66
Q7	wrong ans	-0.66
Q8	right ans	2
Q9	wrong ans	-0.66
Q10	right ans	2
	TOTAL	4.04

- Mathematical probability says you will gain some ++ score.
- Probability will be 50% or higher for person who has READ more. जिसने ज्यादा पढ़ाई की है उसको यह फायदा देख सकता है. क्योंकि ज्यादा सही चयन कर सकता between A or C etc.

What is two factor authentication?



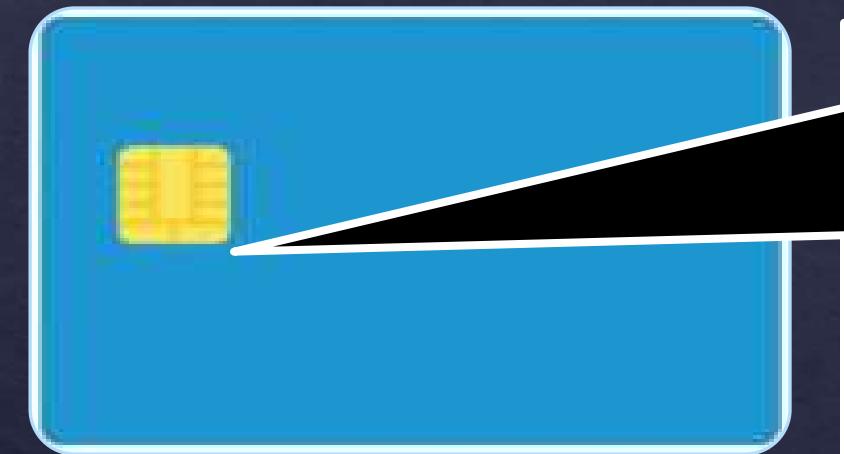
1 factor / step

Enter username & Password
→ login to gmail

2 factors / steps

- i. 1) Enter username: password
- ii. 2) OTP code in mobile (or **USB pendrive containing secret code**)
Then u can login

Chip based credit / debit card has 2 factors of authentication



This chip contains info

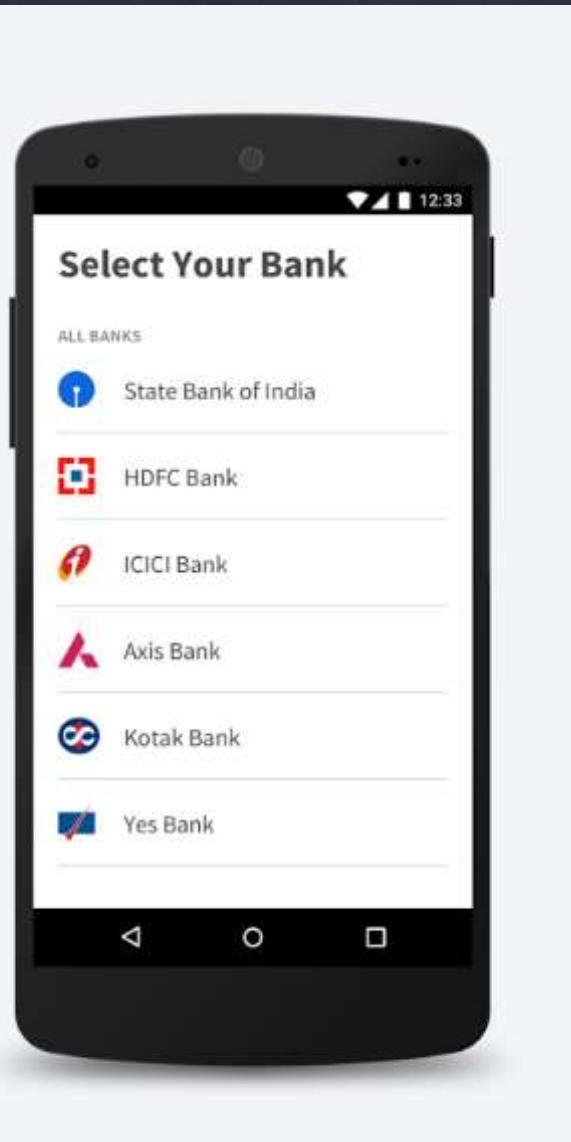
- Mrunal Patel: Bank account number etc
- Factor#1. शॉपिंग करते वक्त मैं अपना कार्ड डालूंगा तो Mrunal के account से पैसों की लेनदेन होगी। Bill Gates के account से नहीं



I'll enter my PIN number in this PoS device

- Factor#2. ताकि बदमाश मेरा कार्ड चुरा भी ले, तो भी शॉपिंग नहीं कर पाए

BHIM App has 3 factors of authentication



- 1) {
 - BHIM App binds itself with a mobile device id
 - Same BHIM Account cannot be used from two phones (Similar to Whatsapp App).
- 2) {
 - UPI PIN Number
- 3) {
 - Bank's OTP

So what is the correct answer?

With reference to digital payments, consider the following statements: (*Asked in UPSC-Pre-2018*)

1. BHIM app allows the user to transfer money to anyone with a UPI-enabled bank account. 2 factors
 2. While a chip-pin debit card has four factors of authentication, BHIM app has only two factors of authentication. 3 factors

Which of the statements given above is/are correct?

- (a) 1 only** **(b) 2 only**
(c) Both 1 and 2 **(d) Neither 1 nor 2**

2018: series A Q28. the official answer key says A.
only 1 is correct.



Tough because
this much GK was
not in major news

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Blockchain Technology

- Useful

3 Ways to Obtain BITCOIN (बिटकोइन हाँसील करने के तीन तरीके)



1) Mining



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3) Exchange with
legal tender.



Global initiatives: world
Bank, Marshal Island
Venezuela, El-Salvador



China's CBDC, India Budget



NFT

The Birth of Bitcoins and other Cryptocurrencies



\$: का दबदबा पहले जैसा नहीं रहा

- Fiat money & legal tender in USA
- Its purchasing power in Subprime crisis (2007: more in Pill#3)



Bankers: बस लूटने के लिए बैठे हैं. बिक गई है यह गौरमिट

- Credit Card, ATM, Netbanking:
- “charges” due to ‘middlemen’ (Banks, Payment Gateway ops)



Anarchist groups- अशासनवादी समूह

- Fiat currency = bad.
- Bankers & card companies are evil,
- we'll make our own (Virtual) currency in “Decentralized manner”

हमें डॉलर जैसी वैधानिक मुद्रा
बैंक और सरकार
पर यकीन नहीं है
इसलिए

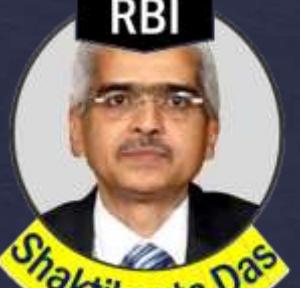
हम विकेंद्रीकृत तरीके से
अपनी
खुद की डिजिटल मुद्रा बनाएंगे



Bitcoin is a decentralized crypto-currency

बिटकॉइन का सारा तामझाम सब विकेंद्रीकृत रूप से हो रहा है

RBI



Central authority



No central authority



Cryptocurrency Bitcoin (2009) by Satoshi Nakamoto (anonymous)

शक्तिशाली कंप्यूटर की मदद से इसका डिजिटल खनन करना है



- 1) Imagine this is a virtual data cube / complex algorithm made using blockchain technology.
- 2) If you solve it, you get Bitcoins.

2) But you cannot mine it with 'spade', you've to...

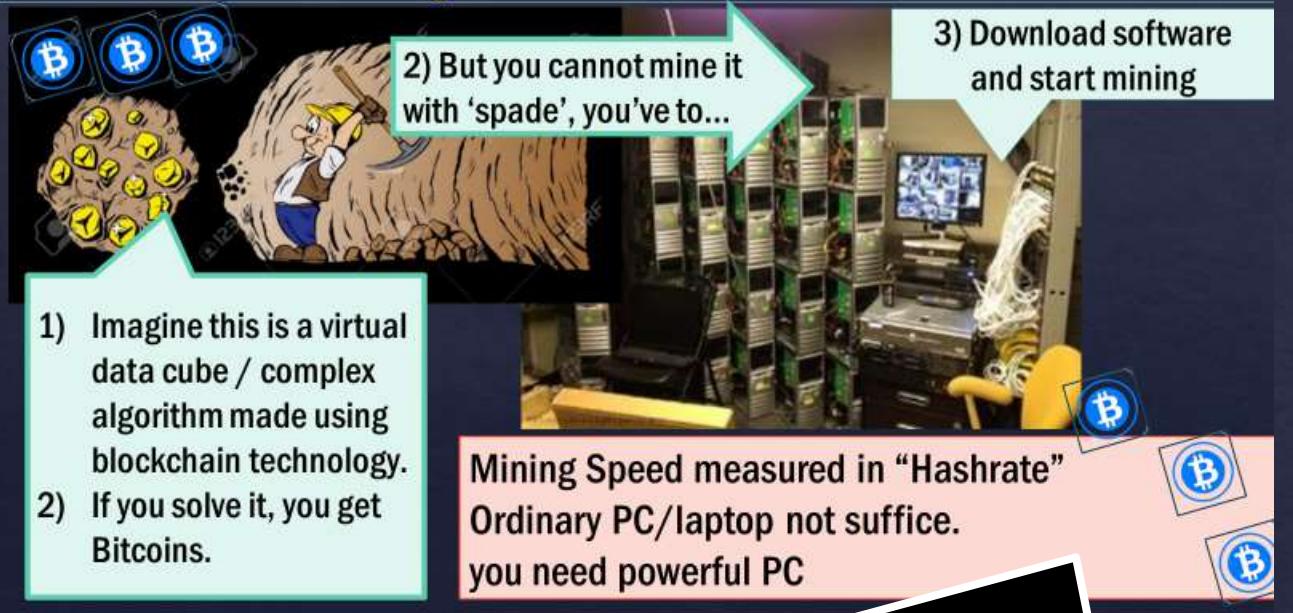


3) Download software and start mining

Mining Speed measured in “Hashrate”
Ordinary PC/laptop not suffice.
you need powerful PC

Cryptocurrency Bitcoin (2009) by Satoshi Nakamoto (anonymous)

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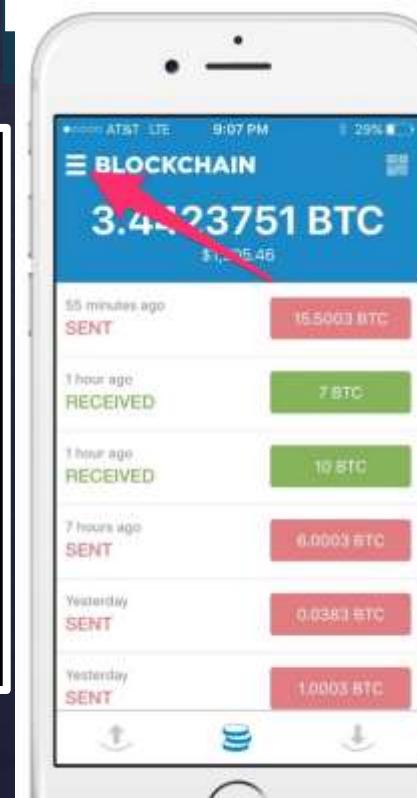
1) Where is this Bitcoin Money stored in user's account?

ये किधर बटवे में संग्रहीत होता है?

Wallet Types

Hot Wallet

- Connected to Internet e.g. App



Cold Wallet

- Offline e.g.
- USB Pendrive



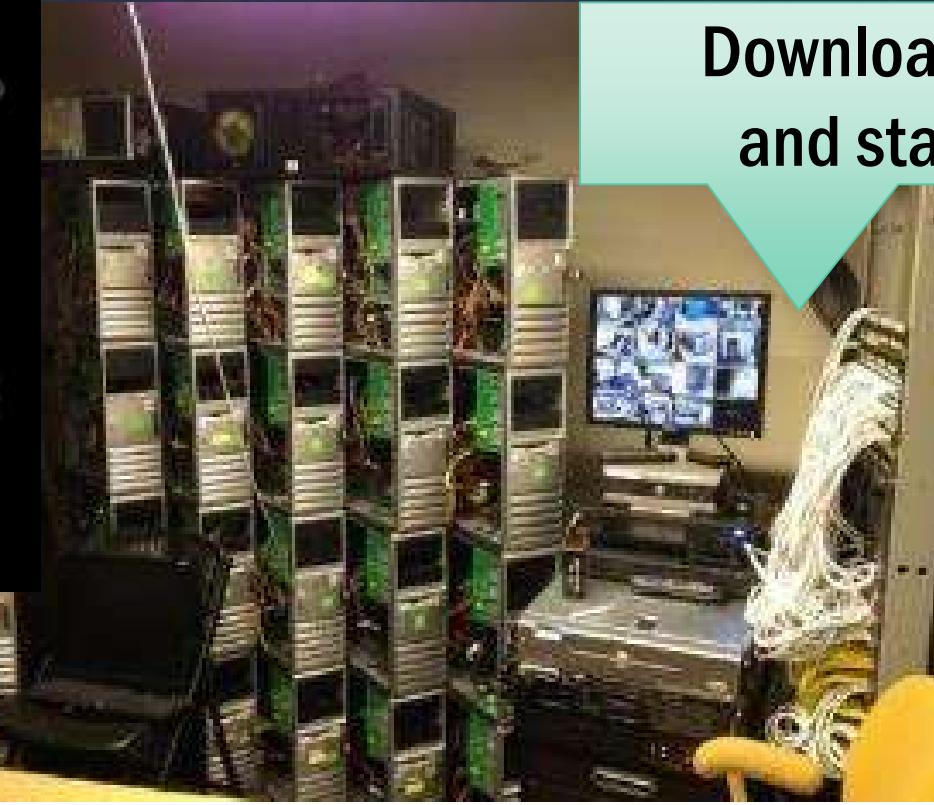
Bitcoin : इसकी कुल संख्या नियत या मर्यादित है।

इसके बहुत छोटे-छोटे टुकड़े हो सकते हैं इसलिए छुट्टे पैसों की मगजमारी नहीं



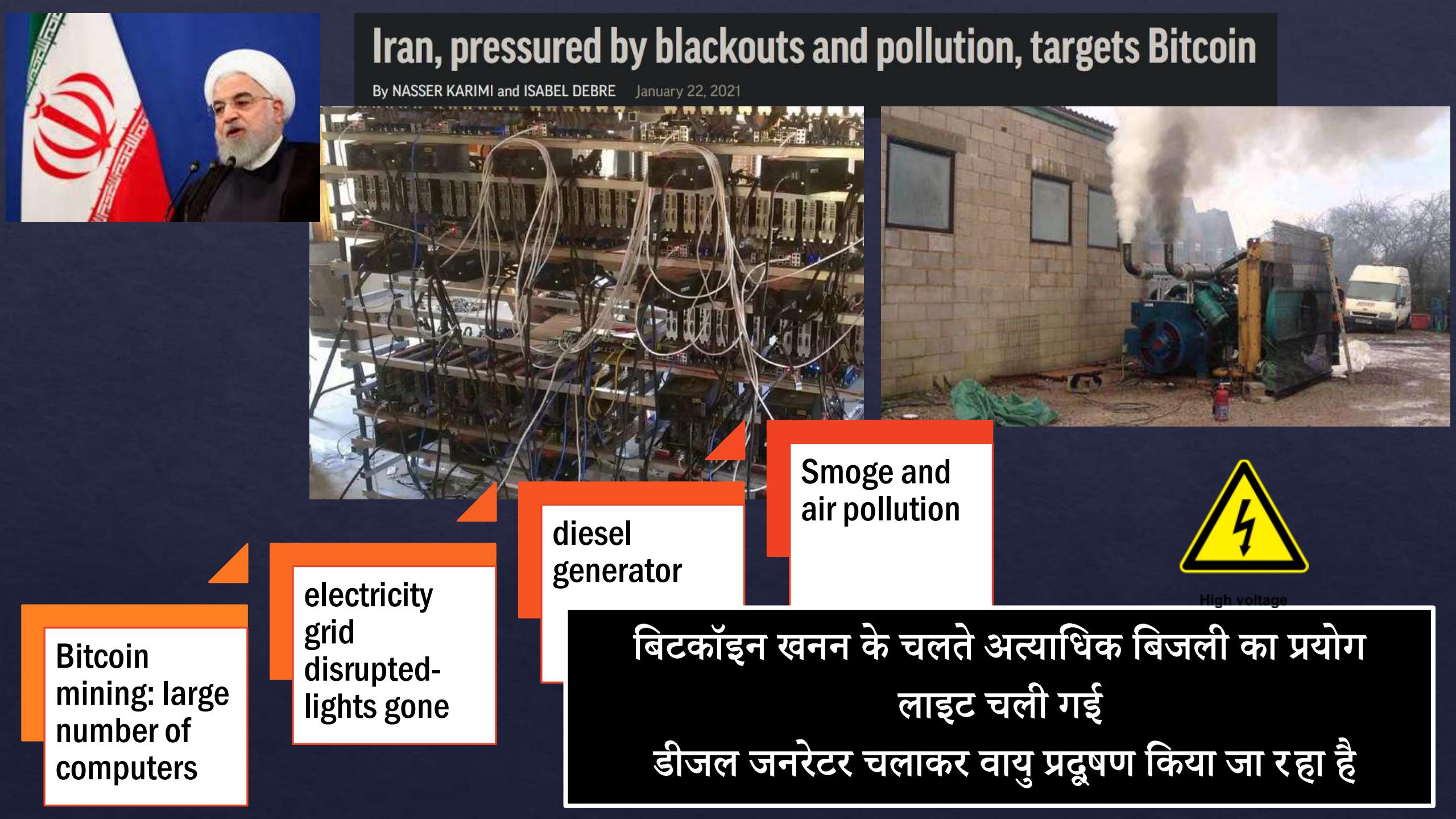
21 million Bitcoins
No new coins beyond that

1 Rs. = $100=10^2$ Paisaa
1 BTC = 10^8 SATOSHI



Download software
and start mining

यह पागलपन बिजली की बर्बादी कर रहा है



Iran, pressured by blackouts and pollution, targets Bitcoin

By NASSER KARIMI and ISABEL DEBRE January 22, 2021

Bitcoin mining: large number of computers

electricity grid disrupted-lights gone

diesel generator

Smog and air pollution



High voltage

बिटकॉइन खनन के चलते अत्यधिक बिजली का प्रयोग
लाइट चली गई
डीजल जनरेटर चलाकर वायु प्रदूषण किया जा रहा है

How to obtain bitcoins & why it is bad? Method #1



Mining with
powerful Computer

बिटकॉइन कैसे हासिल कर सकते हैं उसका
एक तरीका हमने समझा
अब समझते हैं कि यह चीज खराब क्यों है?

- 😢 Waste of electricity
- 😢 E-waste generation.
- 😢 Graphics card price : 2x-4x due to bitcoin mania. Is this productive usage?
- 😢 When quantum computer rises, it'll solve it in seconds, thus crashing the value of Bitcoins.



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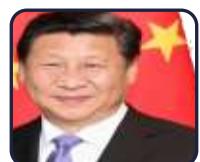


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Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



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3 Ways to Obtain BITCOIN (बिटकोइन हाँसील करने के तीन तरीके)



1) Mining



2) Sell goods /
services to miner



3) Exchange with
legal tender.

How to obtain bitcoins & why it is bad? Method #2

बिटकॉइन हासिल करने का तरीका#2: वस्तु और सेवा बेचो, बदले में बिटकॉइन स्वीकार करो



- I don't have powerful PC for Bitcoin Digital Mining
- but I'll sell you 5000 sarees,
- if you can give me 1 Bitcoin

How to obtain bitcoins & why it is bad? Method #2

बिटकॉइन हासिल करने का तरीका#2: वस्तु और सेवा बेचो, बदले में बिटकॉइन स्वीकार करो

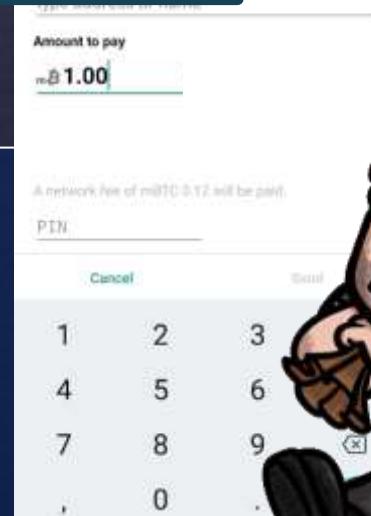


Mining



Sell goods /
services to miner

I don't have powerful PC but
I'll sell you 5000 sarees, if
you can give me 1 Bitcoin



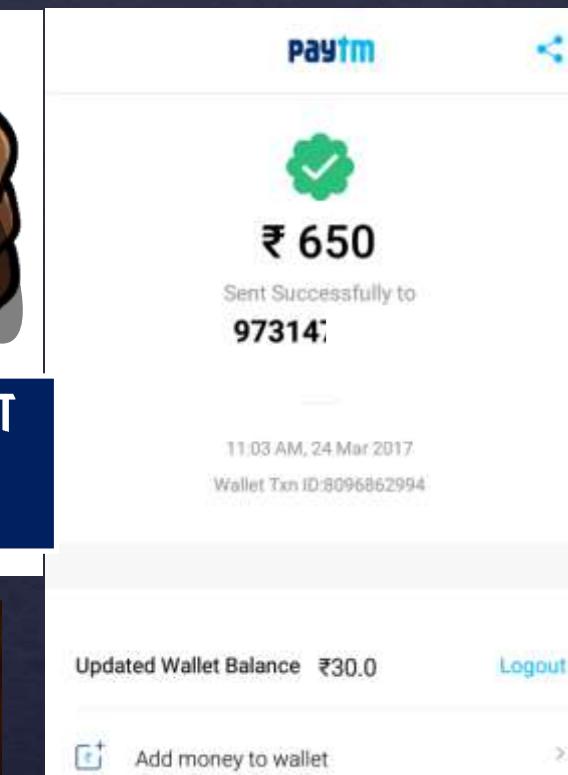
- :(Paytm/Phonepe/gmail where they store your mobile no, IP address, IMEI etc. = traceable in cybercrime
- :(But, Bitcoin wallets: “public address” & pvt key: but **not traceable**. It doesn’t store any such INFO.
- Narcotics & illegal trade, Terror finance =possible.

Transactions can't be traced.

गैरकानूनी चीजों की खरीद-बिक्री में Paytm का उपयोग किया तो आदमी पकड़ा जा सकता है



माद्रक द्रव्यों का विक्रेता
Drug peddler

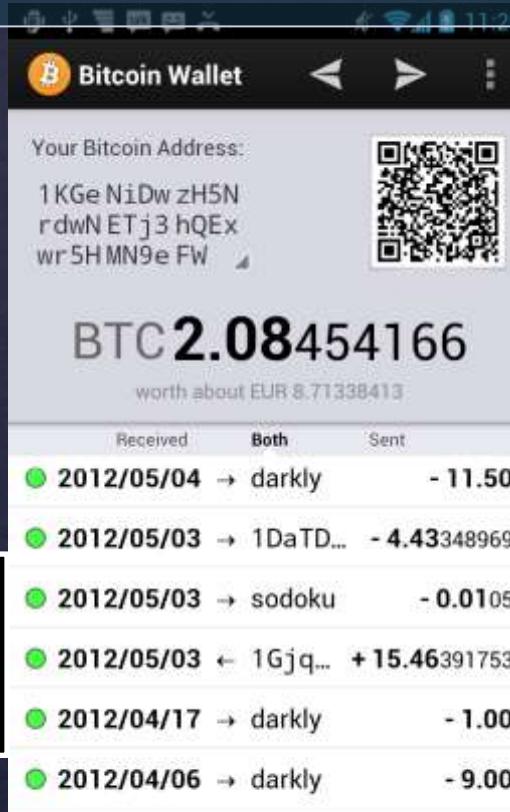


- Paytm is linked with mobile number
- so if used for illegal trade, police can track it, incl. mobile's GPS location, IMEI number, owner info.

गैरकानूनी चीजों की खरीद-बिक्री में Bitcoin का उपयोग किया तो पकड़ना मुश्किल



माद्रक द्रव्यों का विक्रेता
Drug peddler



- Bitcoin transaction doesn't store info about
- your IP Address, phone number, email id, GPS etc.

गैरकानूनी चीजों की खरीद-बिक्री में Bitcoin का उपयोग किया तो पकड़ना मु



- Bitcoin transaction doesn't store info about your IP Address, phone number, email id, GPS etc

- We are preparing the topic for general studies in general terms.
- Not MCA semester exam.
- When upsc starts conducting exam for cyber security experts then we will study that
- So, accept & move on.
#⌚ थोड़ा-पढ़ो-आगे-बढ़ो

I've done graduation in computer science.

It's possible to trace this by doing XYZ.

Why is it not possible? कंप्यूटर साइंस द्वारा इस को पकड़ना संभव है! क्यों संभव नहीं है?



Asia's Richest Man Mukesh Ambani Asked Ransom in Crypto After Bomb Threat

By [Bhushan Akolkar](#)

Published February 28, 2021 | Updated February 28, 2021

हमें बिटकॉइन में फिराती दो
वरना बम से उड़ा देंगे



How to obtain bitcoins & why it is bad? Method #2

बिटकॉइन हासिल करने का तरीका#2: वस्तु और सेवा बेचो, बदले में बिटकॉइन स्वीकार करो

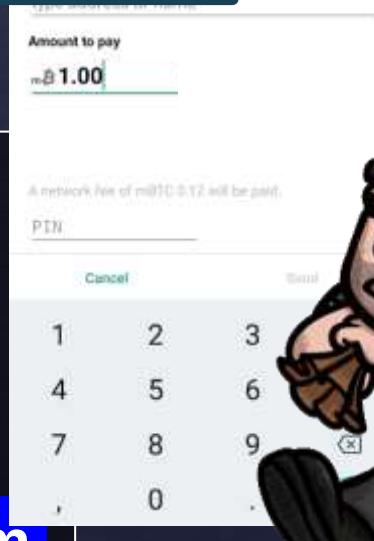


Mining



Sell goods /

I don't have powerful PC but
I'll sell you 5000 sarees, if
you can give me 1 Bitcoin



- ⌚ Shopping Scam: difficult to get justice, in Consumer Protection Act. आपने पैसा दिया था और सामने खराब वस्तु मिली ऐसा ग्राहक सुरक्षा कानून में साबित करना मुश्किल
- ⌚ Selling goods/services in exchange of bitcoins= transaction hidden: Government deprived of GST, Custom duty, Income tax. (more in Pillar#2) पैसों की जगह बिटकॉइन से भुगतान होंगे तो सरकार के लिए निगरानी रखना मुश्किल, कर चोरी को प्रोत्साहन

Transactions can't be traced.

Economy Pillar1A-1: Money Evolution → Bitcoin – Page 28 onwards



Commodity Money

Metallic Money

Paper Money

Bank Money,
digital payment

Crypto
Currency
blockchain



Cryptocurrency: 3 ways to obtain?



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

- Useful

3 Ways to Obtain BITCOIN (बिटकोइन हाँसील करने के तीन तरीके)



1) Mining



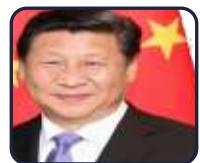
2) Sell goods /
services to miner



3) Exchange with
legal tender.



Global initiatives: world
Bank, Marshal Island
Venezuela, El-Salvador



China's CBDC, India Budget



NFT

How to obtain bitcoins & why it is bad? Method #3

बिटकॉइन हासिल करने का तीसरा तरीका: रुपया या डॉलर देकर बदले में बिटकॉइन खरीदो

I'll pay you rupee or dollar...just give me bitcoin.



Mining



Sell goods / services to miner



Exchange with legal tender.

Learned last night

Learned last night

Continued from here

I'll pay you \$30,000 Dollars

Ok then I'll give you 1 Bitcoin



How to obtain bitcoins & why it is bad?



Mining



Sell goods /
services to miner



Exchange with
legal tender.

UNOCOIN

Buy & Sell Cryptocurrency

Join 1.5+ million people on Unocoin to trade with
India's most trusted crypto exchange



ऐसे ऑनलाइन वेबसाइट से
रुपया/ डॉलर देकर
बिटकॉइन की खरीद / बिक्री होती है

Buying and selling price difference =
commission of this online exchange portal.
इन दलालों का खरीदने और बेचने का भाव अलग होता है
तभी तो मुनाफा होगा

~70,000\$ in
Nov-2021



I'll pay you \$35,000 Dollars



Ok then I'll give you 1 Bitcoin



“Crypto Winter”
दाम गिर गए हैं बाजार में
गर्मी चली गई है



\$20,000 in July -2022



Q1) but why bitcoin prices



Q2) why people invest in it if
this is bad?



Prices depend on supply-demand factors

1. **Anarchist (अशासनवादी), Geeks/nerds:** who hate fiat money- **they want to buy.**
2. **Investors speculation:** buying similar to gold/shares.. अभी खरीद लेते हैं फिर किसी और को महंगे में बेचेंगे.
3. **Terrorists, narco-drugs smugglers**
4. **Elon Musk** saying Tesla cars can be bought with Bitcoin in future but later says he'll not allow
5. ++ many other factors...
उन सब की गतिविधियों के चलते दाम कम ज्या दा होते रहते हैं

So why is bitcoin bad? Ans. Terror finance. आतंकी वित्तपोषण



1) Sends \$

अगर सीधा-सीधा पैसा
भेजेगा तो पकड़ा जाएगा



Western Union
= RBI registered
international money
transfer company

Then NIA may find
them



2) Sleeper cell in
India

4) Youth
radicalization,
terror attack



How to obtain bitcoins & why it is bad?



- Stage1: I'll buy Bitcoin using Dollars. और उसे अपने आतंकी साथी को भेजूंगा.
- Bitcoin wallet doesn't store IP address/ GPS etc.



UNOCOIN

Buy & Sell Cryptocurrency

Join 1.5+ million people on Unocoin to trade with India's most trusted crypto exchange

Calculator

• Buy • Sell

1

BTC TO PURCHASE

42,52,356.00

VALUE IN INR

Stage#2: Terrorist will sell bitcoin → gets ₹₹. Difficult



How to obtain bitcoins & why it is bad?



- Stage1: I'll buy Bitcoin using Dollars. और उसे अपने आतंकी साथी को भेजूगा.
- Bitcoin wallet doesn't store IP address/ GPS etc.



COIN

Mujeebu
join

मुजे
Ph.d कराओ

Calculator

Buy

Sell

1

42,52,356.00

BITCOIN TO PURCHASE

VALUE IN INR

Stage#2: Terrorist will sell
bitcoin → gets ₹₹. Difficult



UPSC के
बाबूशने

- This is not course for B.Tech Computer science.
- UPSC not conducting Recruitment exam for the JAMES BOND
- Accept -ve points for Mains Ans Writing & move to next part. # थोड़ा-पढ़ो-आगे-बढ़ो



इतनी पंचात क्यों करनी है, भार्द्द?

- How can we NOT trace it?
- The server must keep record
- When terrorist withdraws ₹₹ from bank account we can find CCTV.
- #ek-tha-tiger #james-bond

Economy Pillar1A-1: Money Evolution → Bitcoin - Page 28 onwards



Commodity Money

Metallic Money

Paper Money

Bank Money,
digital payment

Crypto
Currency
blockchain

Cryptocurrency: 3 ways to obtain? <2 learned last night>



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

- Useful



Global initiatives: world Bank,
Marshal Island Venezuela, El-Salvador



Shaktikanta Das

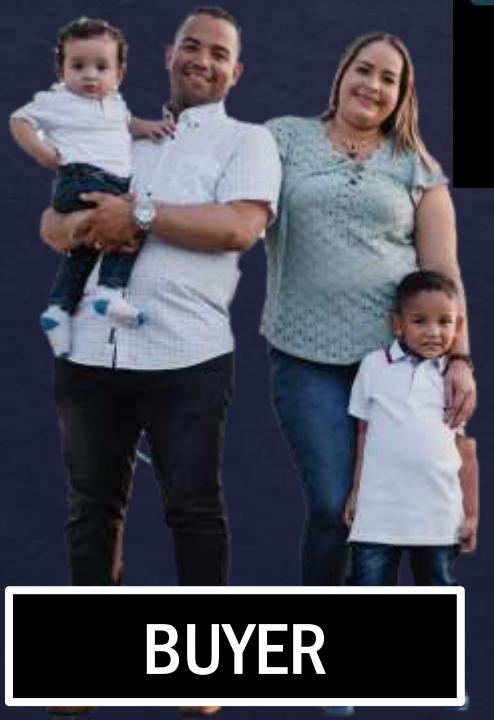


China's CBDC, India's Budget 2022



NFT

बिटकॉइन और दूसरी क्रिएट मुद्राएं के
बारे में रिज़र्व बैंक का क्या रखैया है?
RBI को क्या बिटकॉइन पसंद है?
या **RBI** को नफरत है



RBI in 2018

- Banks must stop association with any crypto company.
- सब बैंकों को आदेश दिया कि रिश्ते तोड़ दो क्रिएटर्सी कंपनियों के साथ



Website selling bitcoins

UC UNOCOIN

₹40 lakh via e-banking

1 Bitcoin

BUYER



SELLER

SC: test of proportionality (अनुपातिकता की परीक्षा)

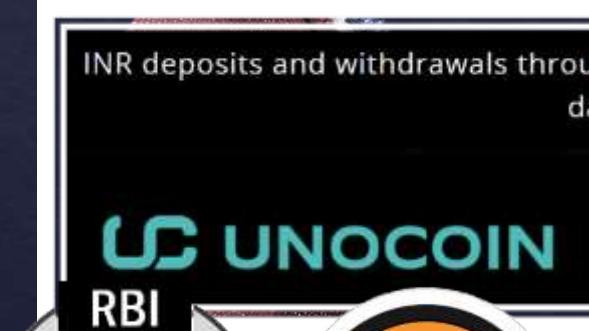
चूहा मारने के लिए तोप का इस्तेमाल नहीं करना चाहिए

2) Violation of
Fundamental
“Right to
Business”.

व्यवसाय का अधिकार



3) ये तो **proportion** मे नही है
=ultra-vires = असंवेधानिक



SC revokes the ban

- ◆ Article 19: All citizens have the right to practice any profession (व्यवसाय का हक)- including those companies dealing with cryptocurrency.
- ◆ financial fraud protection could be achieved by imposing a less drastic ban.
- ◆ So, RBI ban did not pass the test of proportionality (अनुपातिकता की परीक्षा).
- ◆ Road ahead? RBI may design new rules
- ◆ e.g. 1 person can't invest >₹20k in it, coin selling company must give data to RBI every 3-3- months etc.



चूहे को मारने के लिए तोप के इस्तेमाल नहीं करना चाहिए।



Bitcoin exchange rate: lure of quick money & Thugs of Hindustan

बहुत सारे मध्यम वर्ग के लोग ज्ञांसे में आ जाते हैं



We want to 66% profit our money
but can't buy individually @42 lakhs ☹

मुनाफा होता है लेकिन इतनी बड़ी रकम हम अकेले निवेश नहीं कर सकते

Bitcoin frauds: Thugs of Hindustan: Ponzi “Collective investment” schemes

आप सब लोग मुझे थोड़ा थोड़ा पैसा दीजिए → मैं बिटकॉइन खरीद कि आपको 66% profit दिलवाऊँगा

Buy Sell

0.01 BTC

BTC TO PURCHASE

₹42,000

VALUE IN INR

1) We don't know how to do this online. गांव के कम पढ़े लिखे लोग को ठगा जाता है

1 Rs. = 100 Paisaa
1 BTC = 10^8 SATOSHI

2) @100 people give me 42,600 each, and I'll make it 66% by investing in bitcoin.



Bitcoin frauds: Thugs of Hindustan: Ponzi “Collective investment” schemes

आप सब लोग मुझे थोड़ा थोड़ा पैसा दीजिए → मैं बिटकॉइन खरीद कि आपको 66% profit दिलवाऊँगा

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Bitcoin scams: Indian investors eager for quick profits are being duped by conmen

They lure people into investing in non-existent virtual currencies by promising huge returns after a lock-in period.

Similar issues & developments with Ethereum, Litecoin, Digicoin & LAXMICOIN

Now Bitcoin under SEBI lens, beware of ponzi schemes in cryptocurrency

In India, fake news can cause mob lynching, then duping is easy

<https://thehackpost.com/laxmicoin-india-official-cryptocurrency-launched.html>

The Hack Post

LaxmiCoin, India's official Cryptocurrency has finally launched

Published 3 weeks ago on March 1, 2018

By Nitin Bunny G

<https://www.deccanchronicle.com/nation/in-other-news/100318/laxmicoin-doing-rou...>

DECCAN Chronicle

Friday, Mar 23, 2018 | Last Update : 10:22 PM IST

[Home](#) Nation World South Entertainment Sports Technology Lifestyle

Laxmicoin doing rounds not legal tender: Officials

DECCAN CHRONICLE | NAVEENA GHANATE

Published Mar 10, 2018, 12:50 am IST

Updated Mar 10, 2018, 3:33 am IST

However, CID officials said, "This is a fraud as the government did not recognise any cryptocurrency as legal tender. People should be aware of such scams and false claims. Laxmicoin founders clarified that they were not associated with any government agenda or initiative.

Technology - digital currency like Bitcoin or Litecoin — run on blockchain technology.

Satoshi Nakamoto

- I hate dollar and other fiat currency.
- I will create a decentralised digital currency
- Using Blockchain technology.
- There will be 3 ways to acquire my bitcoins....

How to get bitcoin and why it is dangerous?

- 1) Digital Mining using powerful computers
- 2) Sell goods and services to person who has bitcoin
- 3) buy bitcoin using fiat money (Rupee, Dollar etc)

RBI

a) electricity waste, diesel generator pollution, e-waste, graphics card shortage

b) fraud, narco-trade, Terror finance, Tax evasion

c) Exchange rate volatility= investor's wealth lost. terror finance, tax evasion, frauds

Shaktikanta Das

5) This is dangerous. We'll ban bank and NBFCs from helping any-one in buying and selling of bitcoins

6) @RBI: You are violating the fundamental right to business. Article: 19(1)(g): We'll UNDO your ban.

Nirmala Sitharaman

- 7) we'll charge 30% Tax on profit made in bitcoin. (Budget-2022)
- also, working on a bill/law to ban/regulate bitcoins
- also Creating our own digital currency/CBDC/E-rupee

OECD

8) CARF = global level framework against Bitcoin tax evasion

Given in your Handout

Economy Pillar1A-1: Money Evolution → Bitcoin



Cryptocurrency: 3 ways to obtain?



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador

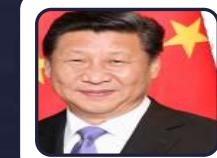


Govt's Stand on Bitcoins

⌚ 30% Tax on profit,
1% TDS

Bill 2 Ban it

- NOT yet Passed



China's CBDC, India's Budget 2022



NFT

Pillars of Economy – new candidates complete backlog first.

A-1

- Money: barter to Bitcoin

A-2

- RBI's monetary policy
- CRR, SLR, Repo etc

B-1

- Classification of Banks-NBFC

B-2

- Government wants
- **30% Capital Gain Tax on Cryptocurrency profit made by investor**
- **1% TDS**
- We'll understand these terms here in Pillar2: Direct Tax.
- Let's not waste 20 minutes here. Because I've to teach it there anyways.

C

D



1) MBFI



2) Budget



3) Intl. Trade

30% Tax on
profit



But u said bitcoin difficult to trace,
then how will govt enforce tax?

लेकिन आपने तो सिखाया कि इसको ढूँढ़ना मुश्किल है तो फिर टैक्स कैसे लगाएंगी सरकार

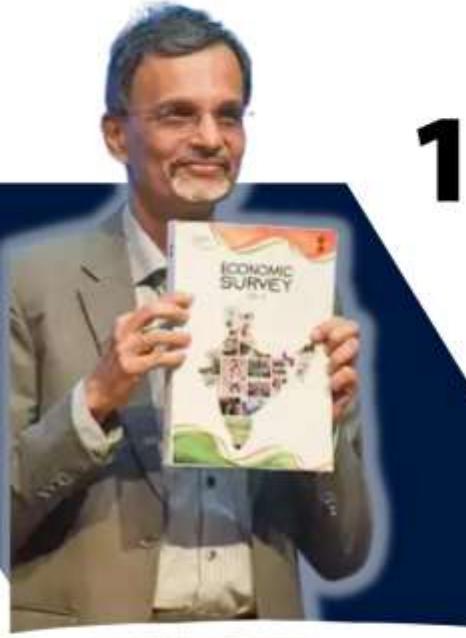


Yes, critiques also argue the same.

That it's difficult to trace & tax.

हाँ इसको असल में ढूँढ़ना मुश्किल है तो टैक्स मांगना मुश्किल है - ऐसा आलोचकों का भी मानना है लेकिन हम को परीक्षा में पढ़ना था तो बजट पढ़ लिया

latest eco survey on bitcoin / cryptocurrency.



Eco Survey 2023



1. Bitcoins are dangerous

- a. scams e.g. FTX
- b. volatile prices
- c. tax evasion
- d. electricity



finish from handout

2. Global cooperation necessary

BITCOIN ETHEREUM DOGECOIN RIPPLE BLOCKCHAIN OPINION

NEWS / BUSINESS NEWS / CRYPTOCURRENCY NEWS / RBI Warns Crypto Can Lead To Dollarisation Of Econo...

RBI warns crypto can lead to dollarisation of economy



1) MBFI



2) Budget



3) Intl. Trade

- What is **Dollarization**
- Pillar3A: Currency Exchange

Economy Pillar1A-1: Money Evolution → Bitcoin



Commodity Money

Metallic Money

Paper Money

Bank Money,
digital payment

Crypto
Currency
blockchain

Audio/Video
Problem?



CTRL

R

Edu Doubt?
Ask through



Cryptocurrency: 3 ways to obtain?



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



China's CBDC, India's Budget 2022



NFT

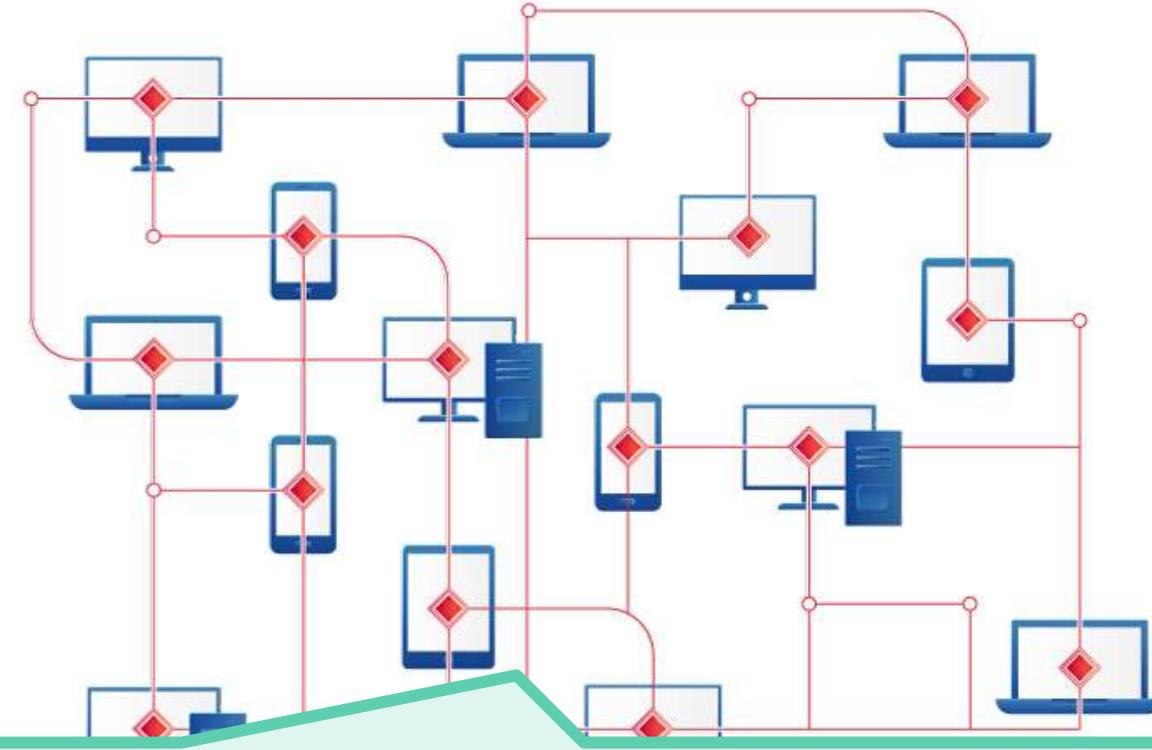
Budget-2018

- Crypto-currencies are not legal tenders in India.
- BUT, will use block chain technology for encouraging digital economy.

Blockchain technology

एक जगह से फाइल डिलीट हो गई तो भी कहीं ना कहीं नेटवर्क के किसी कंप्यूटर में मिल जाएगी

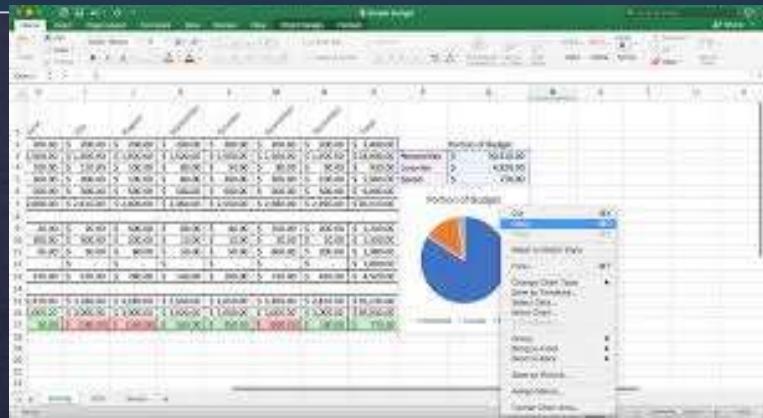
1) If we store data centralized in server/
harddisk= theft, hacking,
natural disasters 😞



- 2) blockchain technology is stored decentralized
- so even if file /record deleted from one computer,
- it stays in the decentralized network.

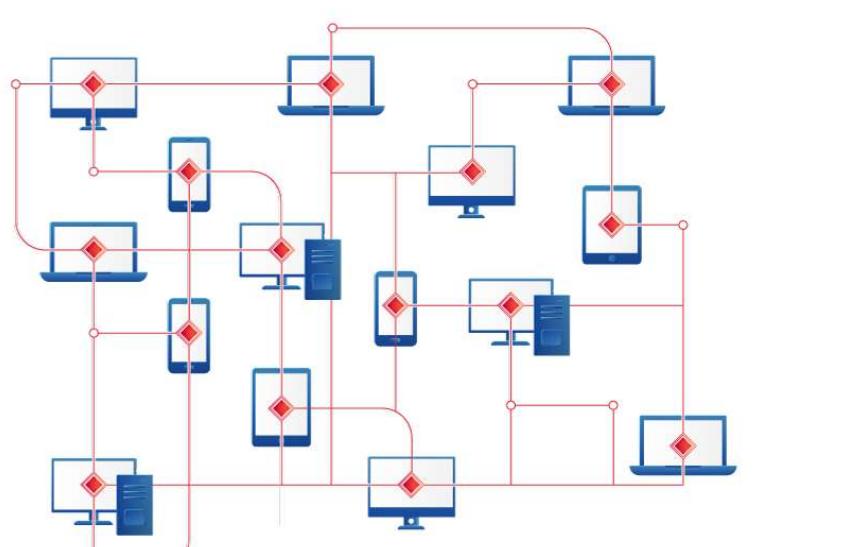
Blockchain technology can be used for storing any type of data

किसी भी प्रकार का डेटा संग्रहित करने के लिए इस टेक्नोलॉजी का इस्तेमाल हो सकता है



DATA about Bitcoin and other Cryptocurrency

- Transaction record.
- 1/1/2009: User-X mined BTC.
 - Wallet balance 50 BTC
- 2/1/2009: User-X sent 1 BTC to User-Y.
 - X's wallet Balance $50 - 1 = 49$ BTC



All the Microsoft Excel like record/database

Marksheet, attendance, Profit loss



Physical transaction

Worker in Mumbai

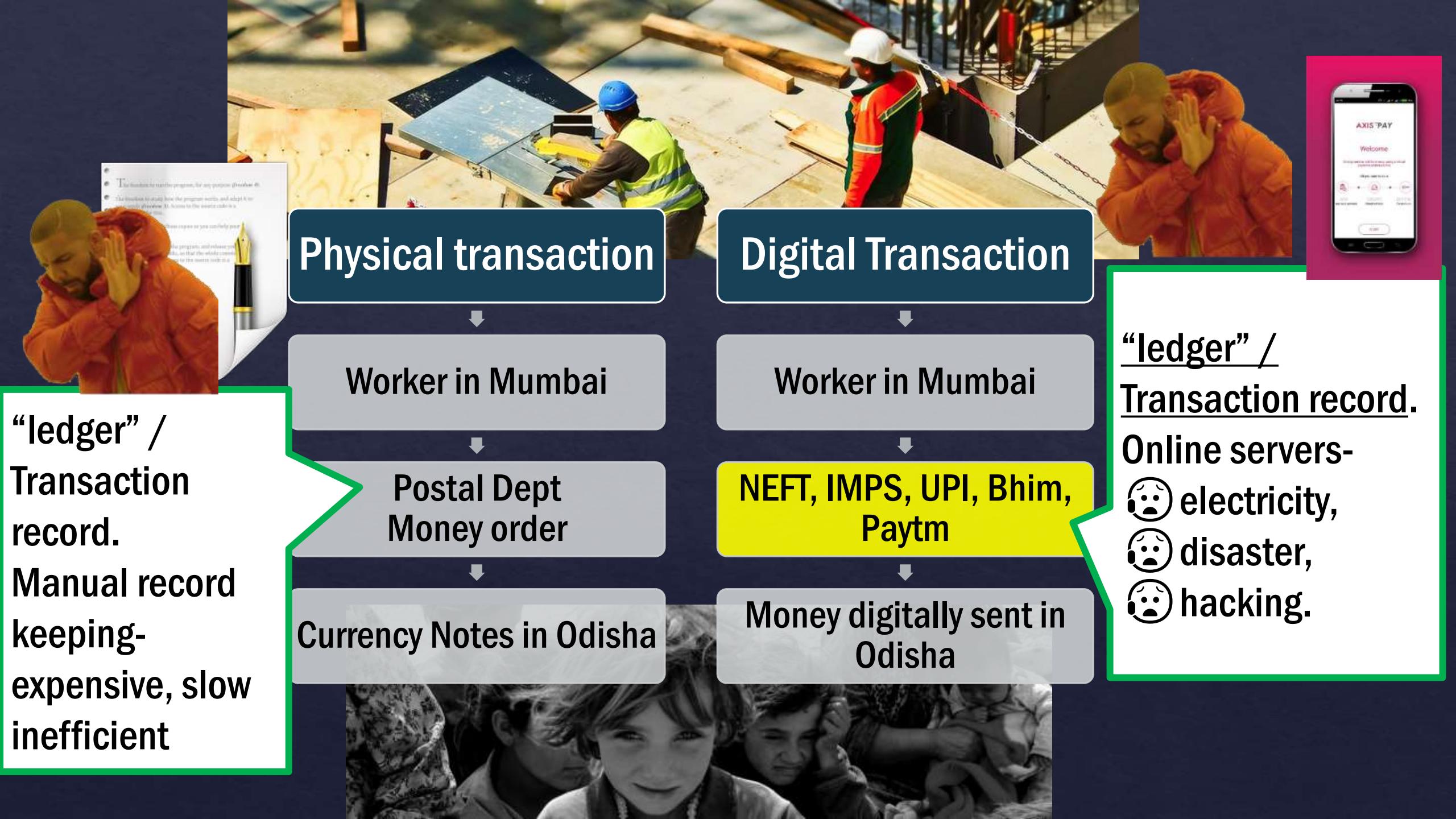
Postal Dept
Money order

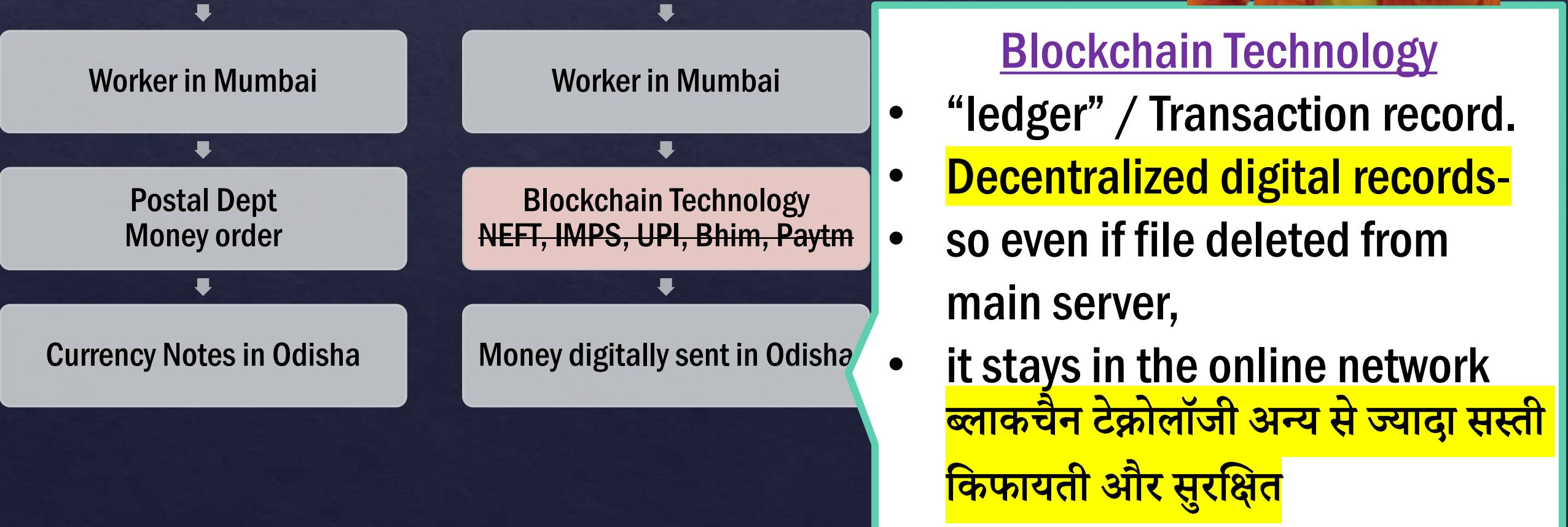
Currency Notes in Odisha

- “ledger” / Transaction record.
- Manual record keeping-
- expensive, slow inefficient 😞

मान लीजिए एक
मजदूर ने अपने
परिवार को मुंबई से
ओडिशा पैसा भेजना है
डाक विभाग की मद्द
से







Cryptocurrency's Blockchain technology- how can it help?

ब्लॉकचेन टेक्नोलॉजी से अगर डाटा स्टोर किया तो उसको संपूर्णता डिलीट करना मुश्किल

We can use it for record keeping of all types of records & transactions:

1. From remittance , loan , stock-exchange to currency exchange, land records, important documents,
 1. to even UPSC result!
2. Fast, Economic, Secure than existing system.
3. ICICI and Yesbank others already implemented to database management.

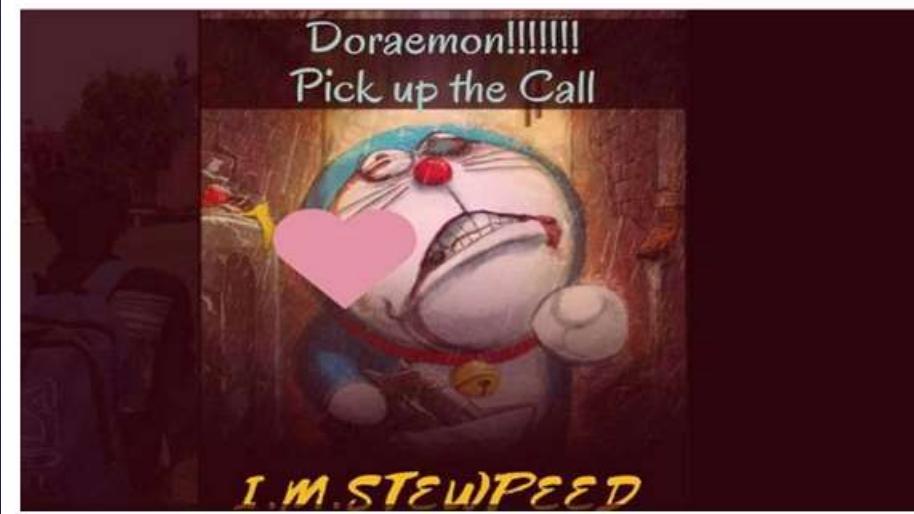
The Indian EXPRESS

Tuesday, January 1, 2019

Students Voice Study Abroad

17-year-old apprehended for hacking UPSC website

The UPSC official website, managed by the government, was hacked on September 10. The homepage displayed an image of a heart and the cartoon character along with the caption: "Doraemon!!!! Pick up the call".



I.M. STEWPEED

The official UPSC website displayed Doremon cartoon. (Image credit: Twitter.com)

Blockchain: “decentralized database that maintains a continuously growing list of records”

लगातार बढ़ती सूची/ रिकॉर्ड को विकेंट्रीकृत डिजिटल डेटाबेस में स्टोर करने की टेक्नोलॉजी है

A screenshot of a Google Sheets interface. At the top, there's a navigation bar with links like 'Copy of Query Example -', 'https://docs.google.com/spreadsheet/...', 'Reader', 'Gmail Mobile', 'Google Cloud Print', 'SNAPP V2 Beta', 'Dashboard - RSC M...', 'MASHezine Form', and 'Scoop.it'. Below the navigation is a title 'Copy of Query Example - Playground : Sheet1' with a link to 'Go to spreadsheet view'. There are filters for columns A through G. The main area shows a table with 13 rows of data. Row 4 is highlighted in yellow and contains a 'Patch' button. The columns are labeled: A - Name, B - Department, C - Country, D - Continent, E - Expenses, Revenue, and G - Adoption. The data includes entries for Josh, Joe, Gil, and others.

A screenshot of a Wikipedia page for 'Padmaavat'. The top navigation bar includes links for 'Visit the main page', 'Special pages', 'Search', and 'Help'. Below the title is a section titled 'Article - Talk'. Under 'Talk', it says 'Padmaavat: Revision history'. It includes a link 'View logs for this page (view / filter log)'. A search bar at the top says 'Show revision history' with dropdowns for 'From year (and earlier)' set to '2019' and 'From month (and earlier)' set to 'From month (and earlier)'. Below this is a section for 'External tools' with links to 'Find addition/removal', 'Find edits by user', 'Page statistics', and 'Page protection'. A note says 'For any version listed below, click on its date to view it. For more help, see Help:Diff.' followed by a detailed explanation of revision symbols. A 'Compare selected revisions' button is present. The main content area lists several revisions made by user 'Benjamin Patterson' on 7 February 2019, with each revision having a timestamp, author, and a brief description of the edit.

- Old can't be deleted = PERMANENT.
- New entries editing: secure, decentralized, multiple stakeholders
- No middleman = credit card type charges to Visa/Mastercard.
- Data storage for Financial transaction, ownership records of land, vehicle and companies..

Public record: If you make entry, others will know it (like Wikipedia)...atleast RBI & taxmen.



- Q1) if blockchain storing all DATA, HOW can we not FIND terror finance /illegal activities / IP Address?
- अगर ब्लॉकचेन टेक्नोलॉजी से सारा डेटा संग्रहित किया गया है तो फिर हम बिटकॉइन द्वारा गैरकानूनी काम हो रहे हैं उसको क्यों नहीं ढूँढ सकते क्योंकि वो भी तो डेटा ब्लॉक चेन टेक्नोलॉजी में संग्रहित है !?

- Wikipedia = HTML webpage. Every one can read
- GMAIL = HTML webPage. But I can't read your email! It requires username-password.
- So it depends on how website/app is designed.
- Because data will have some encryption. This course is not for B.Tech (Computer science) or recruitment of forensic analyst in NIA. UPSC CSE=bitcoin not more than 250 words even in Mains. #%





- Q1) I still did not understand blockchain & Bitcoin. मेरे को अभी भी समज में नहीं आया काम कैसे करता है?

- A1) Watch **youtube Tech-video** to satisfy further **intellectual curiosity** on how blockchain works.
- **but i don't see that as the best use of time from exam point of view.**



Economy Pillar1A-1: Money Evolution → Bitcoin



Cryptocurrency: 3 ways to obtain?



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



China's CBDC, India's Budget 2022



NFT

Commodity Money

Metallic Money

Paper Money

Bank Money, digital payment

Crypto Currency blockchain

Audio/Video Problem?



CTRL R

Edu Doubt?
Ask through



2) Development loans to poor nations



ब्याज पर पैसा दीजिए हम गरीब देशों को लोन में देंगे

- 1) Give us your money,
- 2) we give you this bond.
- 3) You'll earn ~2% annual interest
- 4) We'll return Principal after 2years.



Currency
Aussi-dollar

1) Investors in rich nations

2) Development loans to poor nations



1) Investors in rich nations

ब्याज पर पैसा दीजिए हम गरीब देशों को लोन में देंगे

- 1) Give us your money,
- 2) we give you this bond.
- 3) You'll earn ~2% annual interest
- 4) We'll return Principal after 2years.

2) If this allotment process & its data storage done through centralized manner in

- ⌚ server/ harddisk = theft, hacking,
- ⌚ natural disasters = server disruption⌚

हमें यह डेटा केंद्रीय को तरीके से नहीं विकेन्द्रीकृत तरीके से रखना है

Development loans to poor nations



Investors in rich nations

Give us your money, we give you this bond. You'll ~2% annual interest We'll return Principal after 2 years.

If this allotment process & its data storage done through centralized server/ harddisk = cost, theft, hacking, natural disasters ☺



THE WORLD BANK



Currency
Aussi-dollar

Database Management

Blockchain Tech.

निवेशकों में बांड आवंटन के डाटा प्रबंधन में ब्लॉकचेन टेक्नोलॉजी का इस्तेमाल



Economy Pillar1A-1: Money Evolution → Bitcoin



Cryptocurrency: 3 ways to obtain?



Cryptocurrency is dangerous

- RBI & India Govt's stand?

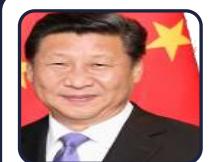


Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



China's CBDC, India's Budget 2022



NFT

Commodity Money

Audio/Video Problem?



Edu Doubt?
Ask through



Some countries have launched their own Cryptocurrency



Marshall Island Legal Tenders

1) USA Dollar
Paper Currency

2) SOV
Cryptocurrency

Marshall Islands (यहाँ पर दो किस्म की मुद्राएं वैद्य हैं)

- Capital Majuro, Sovereign Nation, free association with USA (Defense, social security, budget)
- Originally, Legal Tender was US Dollars.
- 2018: became first country to launch sovereign cryptocurrency named “Sovereign” [SOV]
- TWO Legal tenders: \$ and SOV.

**2) One Petro Coin / Petromoneda / Petros Cryptocurrency
= 1 Venezuelan oil barrel's market price**



Venezuela: TWO Legal Tenders

**1) Bolivar
Paper Currency**

**2) Petro
Cryptocurrency**



Just 1 Word Asso



**2) One Petro Coin / Petromoneda / Petros Cryptocurrency
= 1 Venezuelan oil barrel's market price**



Q) How is its price determined (इसकी कीमत कैसे तय होती है)?

Ans. NOT important (अपनी परीक्षा के लिए काम करना है)

 बस एक लाइन याद रखनी है यह सब पंचात बाकी की कुछ काम की नहीं

Venezuela: TWO Legal Tenders

**1) Bolivar
Paper Currency**

**2) Petro
Cryptocurrency**





El-Salvador Legal Tenders (2021)

1) US Dollar
Paper Currency

2) Bitcoin
Cryptocurrency



PHD/ Moral Outrage. कुछ लोग मुददे को खुद ही जटिल बनाना चाहते हैं



- Bitcoin not fiat money
- Then how can it be legal tender in El-Salvador?

- Already explained in legal tender lecture (last week के लेक्चर में बता चुका हूँ)
- Watch video course sequentially from Lecture#1 onwards



मुझे

Ph.d कराओ



Virtual currencies

Using blockchain technology

Using other technology

cryptocurrency

Digital currency
but Not
cryptocurrency

इतनी पंचात क्यों करनी है, भाई?

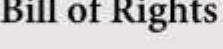
Marshall Island SOV
Is Virtual Currency
But not Cryptocurrency
Because it's not based on Block chain technology

👉 This pedanticism /
classification / internal
difference
NOT IMP 4 IAS

Sufficient to know
virtual/digital/cryptocurrency
Matters are given in handout.



10.24 🔒 ₹:🌐 CRYPTOCURRENCY PERMITTED IN OTHER NATIONS/GROUPS

 UNICEF 	<ul style="list-style-type: none">⇒ United Nations International Children's Emergency Fund (UNICEF, HQ-New York, USA; 1946, later renamed to UN Children's Fund)⇒ 2019: UNICEF setup a Cryptocurrency Fund to accept donations in cryptocurrencies. It has become the first UN organization to accept cryptocurrency. (यूनिसेफ संस्था दान में क्रिप्टो मुद्रा का भी स्वीकार करती है)
 World Bank (More about this org in Pillar#3B)	<ul style="list-style-type: none">⇒ 2018: World Bank launched World's first blockchain bond called "Bond-i" in Australia, denomination: Australian Dollars → public invests, gets ~2% interest after 2 years.⇒ Blockchain bond requires less cost in server / database /paperwork maintenance unlike traditional bonds.  <i>More in Pillar#1C: SEBI/Sharemarket</i>
 Bill of Rights	<ul style="list-style-type: none">⇒ World Economic Forum (WEF) is a non-government organization in Cologny-Geneva, Switzerland. (विश्व अर्थिक मंच. गैर सरकारी संगठन)⇒ 2020: Published a document, 'Blockchain Bill of Rights'. Document talks

Such self-explanatory things

Read from handout

हर छोटी चीज़ जो स्वयं स्पष्ट है उसे वीडियो में पढ़ाने नहीं बैठूंगा



✓ 20 min reading

🕒 40 min video

Economy Pillar1A-1: Money Evolution → Bitcoin



Commodity Money

Metallic Money

Paper Money

Bank Money,
digital payment

Crypto
Currency
blockchain

Audio/Video
Problem?



CTRL R

Edu Doubt?
Ask through



Cryptocurrency: 3 ways to obtain? <2 learned last night>



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

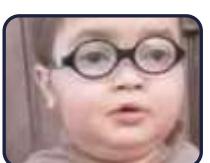
- Useful



Global initiatives: world Bank,
Marshal Island Venezuela, El-Salvador



China's CBDC, India's Budget 2022



NFT

What is Stable Coin?





(volatile) cryptocurrency

- Its price is not backed by \$, gold, government securities, shares, bond....
- Its price simply depends on speculation (सट्टेबाज़ी).
- इसके दामों में स्थिरता नहीं कम ज्यादा होते रहते हैं

- Bitcoin price depends on greed / fear of investors.
- निवेशकों को कितनी लालच या डर है उस हिसाब से बिटकॉइन का दाम तो बढ़ता या कम होते रहता है





(volatile) cryptocurrency

- Its price is not backed by \$, gold, government securities, shares, bond....
- Its price simply depends on speculation (सट्टेबाज़ी).
इसके दामों में स्थिरता नहीं कम ज्यादा होते रहते हैं

Stable coin?



e.g. I promise to honor
1LIBRA = ₹70 = \$1
from my own locker

Libra



- **Stablecoin** is a type of cryptocurrency
- Its price is backed by a reserve asset like gold / dollar / fiat currency. आधार स्वरूप कुछ संपत्ति रखी है.
इसलिए इसका दाम स्थिर रहता है
- e.g. Facebook's proposed 'Libra' → France/EU opposed → **RENAME Project DIEM** → Sold to another company फेसबुक ऐसा कुछ करना चाहता था लेकिन विरोध के चलते दूसरी कंपनी को नाम बदलकर बेच दिया

Economy Pillar1A-1: Money Evolution → Bitcoin - Page 28 onwards



Commodity Money

Audio/Video Problem?



Edu Doubt?
Ask through



2020-May: People's Bank of China (PBC) started trials to issue its paper fiat money Yuan/Renminbi in digital format. (कागजी रूप में मुद्रा छापने की जगह, डिजिटल रूप में जारी करना → और उसे लाभार्थी को इं-बैंकिंग के जरिए मुहैया कराना)
⇒ PBC will use supercomputer to create its fiat currency (Yuan also called 'Renminbi') in digital format → transfer it to the recipient via e-banking e.g. loan to govt, salary to employee etc.



Cryptocurrency: 3 ways to obtain? <2 learned last night>



Cryptocurrency is dangerous

- RBI & India Govt's stand?



Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



China's CBDC, India's Budget 2022



NFT

Problems with issuing currency notes in ‘Physical/cash’ form

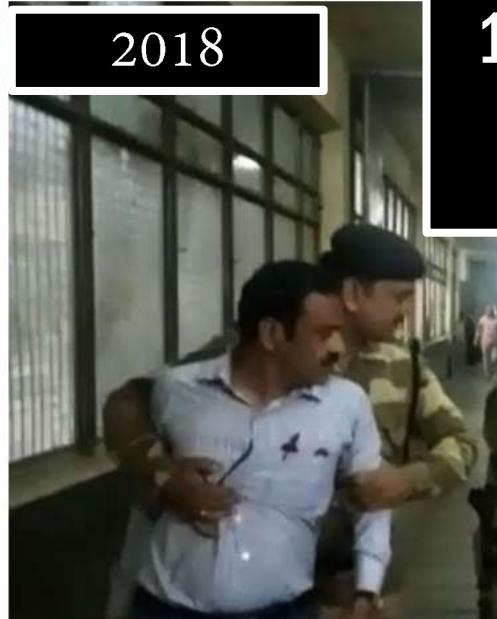
नगदी मुद्रा छापने में क्या चुनौतियां नुकसान मर्यादा हैं 😠

Officer Steals Rs 90 Lakh From Currency Printing Press By Stuffing Note Bundles In His Sneakers Daily

The deputy control officer in the Notes Verification Section was caught by CISF trying to sneak out Rs 20000 in his sneakers

2018

1) नोट छापने की फैक्ट्री में ही कर्मचारी पसा चुरा रहा था



Mumbai Police find D-company link in fake currency racket

As per senior police officials, earlier, the Dawood Ibrahim's gang used to send fake currency via Bangladesh and Nepal route but these routes are now completely closed down. So, it has started using the air route.



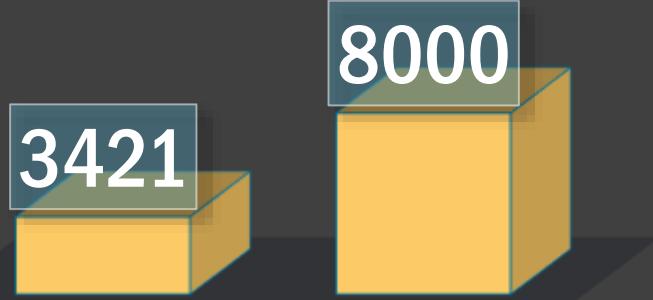
3) नकली नोट छाप कर पाकिस्तान भारत को नुकसान पहुंचाना चाहता है



2) Ink, paper, silver thread, staff, security, electricity.... नोट छापने के लिए पैसा चाहिए

■ RBI Cost of Printing Currency Notes
in cr

3421



2016

2017

Next time we'll learn Pillar#1A1:Monetary Policy Lecture

RBI

Loans: short term, long term
Repo rate, MSF, G-Sec, T-bill



Print the notes → circulate

केंद्रीय बैंक नोट छापता है और
फिर वही नोट पूरी अर्थतंत्र में
धूमते रहते हैं



Scholarship, subsidy,
staff salary

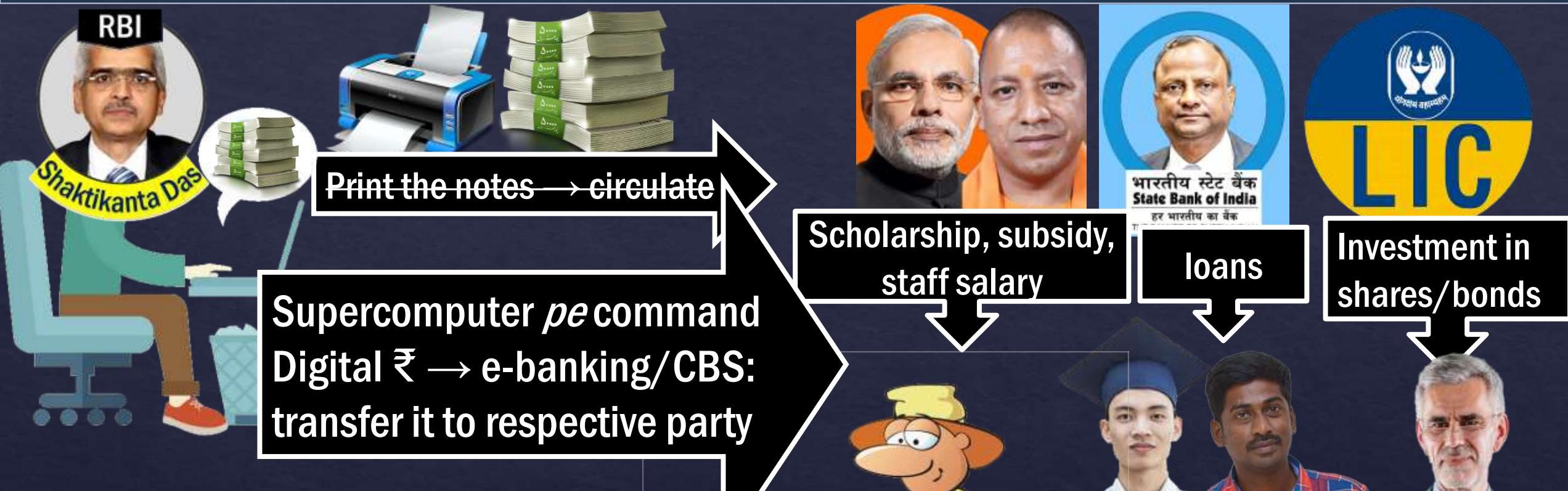
loans

Investment in
shares/bonds



Central Bank Digital Currency (CBDC)/Sovereign Digital Fiat Money / Digital Base Money

नोट को कागजी स्वरूप में छापो को मत कंप्यूटर कमांड देकर डिजिटल स्वरूप में जारी कर दो



- **2020**-China also started such trials
- **2022**- India's Budget: RBI will also issue “**Digital Rupee**” using Blockchain technology.

Central Bank Digital Currency (CBDC)/Sovereign Digital Fiat Money / Digital Base Money

नोट को कागजी स्वरूप में छापे को मत कंप्यूटर कमांड देकर डिजिटल स्वरूप में जारी कर दो



- 2020-China also started such trials
- 2022- India's Budget: RBI will also issue “**Digital Rupee**” using Blockchain technology.

मुझे
Ph.d कराओ



UPSC के
बाबूशोने



- But how can RBI issue “Digital Rupee”?
- As per coinage act, only Government can issue 1 rupee coin and 1 rupee note!
- रिज़र्व बैंक कैसे डिजिटल रुपया जारी कर सकती है हमने तो पढ़ा कि सिर्फ भारत सरकार ₹1 का सिक्का और ₹1 की नोट जारी करती है



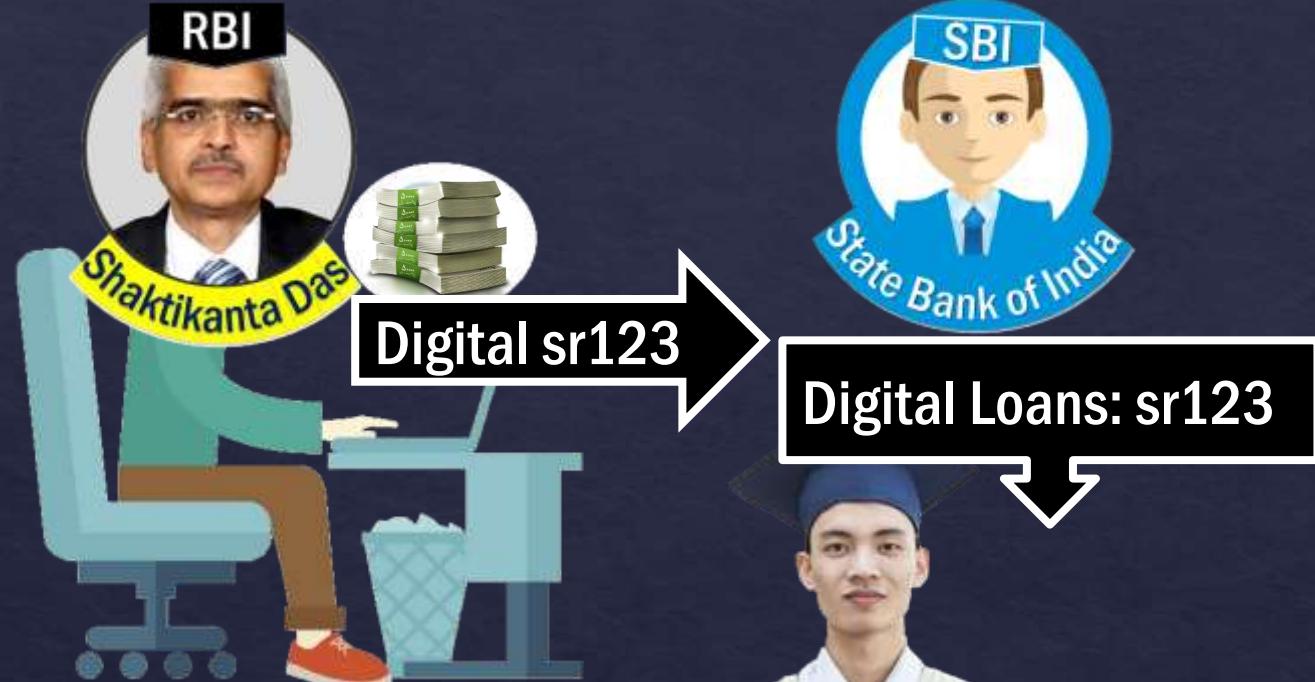
- Observe the words carefully. आप ध्यान से शब्दों पर गौर कीजिए
- ✌ She did not say “RBI will issue 1 rupee COIN in digital format”. निरमला सीतारमण ने ऐसा नहीं कहा कि रिज़र्व बैंक ₹1 का डिजिटल सिक्का जारी करेगी
- ✓ She said “RBI will issue Central Bank digital currency, which will be called Digital Rupee” उसने ये कहा है, रिज़र्व बैंक केंद्रीय बैंक डिजिटल मुद्रा जारी करेगी जिसका नाम डिजिटल रुपी होगा
- Nowadays RBI using the term “E-Rupee” for it.



Traceability



Anonymity



Digital Fee: sr123
Education Mafia



Central Bank Digital Currency (CBDC) → Benefits → logical order



Minor (गौण) benefit: Spread of virus

- Physical currency, Digital currency
- But, How many people fallen ill that you're writing this a MAJOR POINT?!



I'll write this minor point first,
so evaluator can think
**I'm great intellectual & I'm
“Different from others”**



MAJOR (प्रमुख) Benefits: for economy

- DATA: 8000cr printing cost ↓
- Printing, transporting, counterfeiting
- Traceability, Promptness



This kid lacks the
ability to
prioritize goals in
a logical order.
**=NOT officer like
quality**



Digital Divide

- Access to gadgets, internet, electricity



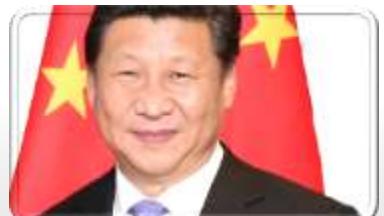
Financial Literacy

- How to do e-banking/ m-banking



Access Points

- Not every village shopkeeper accepts digital payment

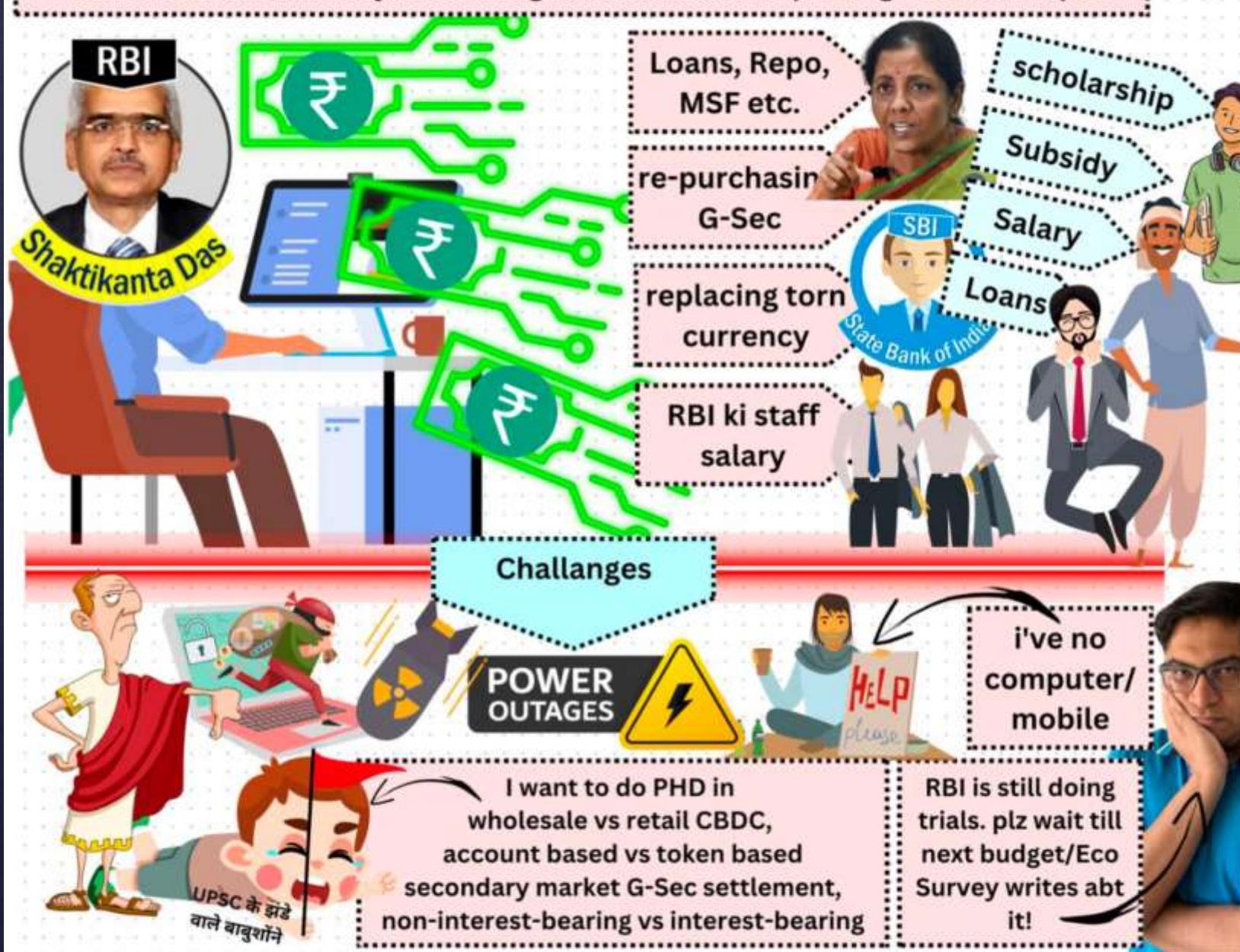


Cyber Terrorism/Nuclear Attack/Natural Disaster.

- If electronic equipment stops functioning → economy will stop functioning.



Let me issue the currency notes in digital form instead of printing = CBDC/E-rupee



Given in your handout

What does latest budget / Economic Survey say about this CBDC? Ans. Not much for exam.

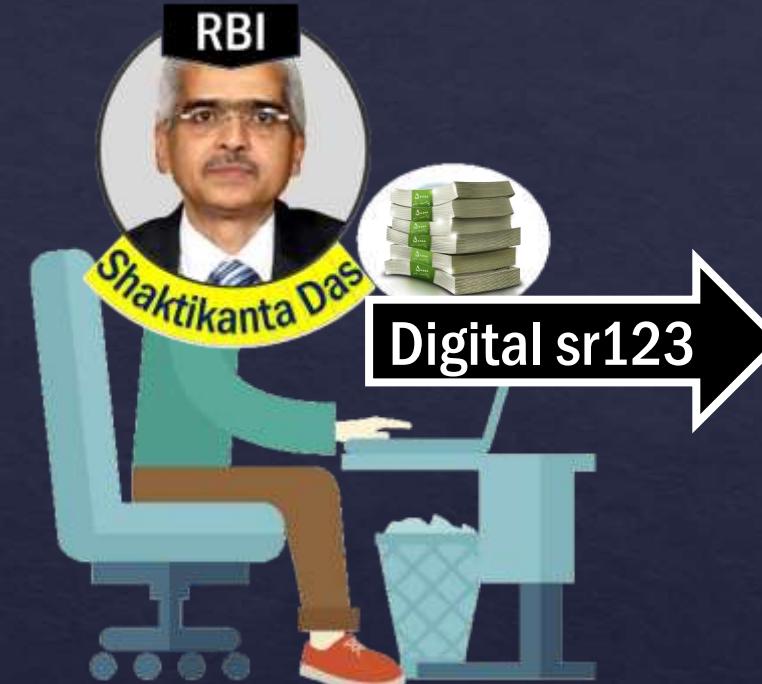
Understand the Difference

Edu Dept wants to deliver ₹500 ke shoes to child from poor family

E-Rupi (UPI) → गुटका और दाढ़ की दुकान पर वो काम नहीं करेगा



E-Rupi, NPCI



E-Rupee, RBI

Economy Pillar1A-1: Money Evolution → Bitcoin



Commodity Money

Audio/Video Problem?



Edu Doubt?
Ask through



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Cryptocurrency: 3 ways to obtain? <2 learned last night>



Cryptocurrency is dangerous

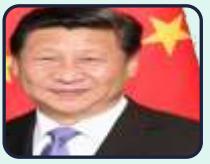
- RBI & India Govt's stand?

Blockchain Technology

- Useful



Global initiatives: world Bank, Marshal Island Venezuela, El-Salvador



China's CBDC, India's Budget 2022



NFT

Fungibility= Two conditions must be met simultaneously

दो शर्तें का एक साथ पालन होना चाहिए

BOTH conditions must be met simultaneously 2 शर्तें का एक साथ पालन होना चाहिए

EXAMPLES	Condition#1 Division possible	Condition#2 Mutual substitution possible	IS IT Fungible? $1+2=$
• Currency Note			

Currency Notes / coins are divisible

क्या हम इन नोटों का विभाजन कर सकते हैं जवाब है हाँ



Can we divide it?

$$₹2000 = ₹500 \times 4$$

YES!

Fungibility= Two conditions must be met simultaneously

दो शर्तों का एक साथ पालन होना चाहिए

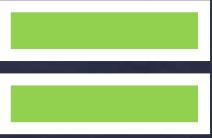
BOTH conditions must be met simultaneously

2 शर्तों का एक साथ पालन होना चाहिए

EXAMPLES	Condition#1 Division possible	Condition#2 Mutual substitution possible	IS IT Fungible? $1+2=$
• Currency Note	<input checked="" type="checkbox"/> YES		

Currency Notes: Mutual substitution possible

मान लो रेस के घोड़े की कीमत है 5 करोड़ रुपए



Yes u can buy
इन नोटों से खरीद
सकते है ?
हाँ बिल्कुल



Yes u can buy
इन नोटों से खरीद
सकते है ?
हाँ बिल्कुल

Fungibility= Two conditions must be met simultaneously

दो शर्तें का एक साथ पालन होना चाहिए

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EXAMPLES

Condition#1
Division possible

Condition#2
Mutual substitution
possible

IS IT
Fungible?
 $1+2=$

- Currency Note
 $2000 = 500 \times 4$

YES



YES



YES

Fungibility= Two conditions must be met simultaneously

दो शर्तें का एक साथ पालन होना चाहिए

BOTH conditions must be met simultaneously 2 शर्तें का एक साथ पालन होना चाहिए

EXAMPLES

Condition#1
Division possible

Condition#2
Mutual substitution
possible

IS IT
Fungible?
 $1+2=$

- Currency Note
 $2000 = 500 \times 4$

YES



YES



YES

- Bitcoin
 $1\text{BTC} = 10^8 \text{ Satoshi}$

YES
(Bitcoin : Satoshi)

YES
(Bitcoin : Satoshi)

YES
Bitcoin
fungible



Diamond Weight: 1 carat = 0.2 grams

Diamond pricing: एक मोटा वाला हीरा छोटे वाले हीरो से ज्यादा मूल्यवान माना जाता है



वजन भले एक समान हो
लेकिन मूल्य एक समान नहीं

100 carat (20gm)

ka single diamond

=\$100 million

क्योंकि आकार और वजन में मोटा है
इसलिए उसे ज्यादा मूल्यवान माना
जाता है



1-1 carat ka single diamond

=\$2000

So, 100 Nos = 2000×100 Nos

=\$2,00,000 (even if weight is 100carat)

वजन कुल मिलाकर 100 केरेट हुआ

परं लेकिन मूल्य एक समान नहीं होगा



Diamond is **not fungible**. Because,
In a fungible item: division yes...mutual substitution yes



If u break it down
Then Value 

Value of 1 race horse
= 100 carat diamond.



= \$100 million ka
Race horse



Sum of these will not equal the big
diamond in terms of value

100 carat x 1 diamond
Doesn't = 1 carat x 100 diamond.

So, this is also a
limitation of
barter system.

Difficult to do trade.



व्यापार करना इस कारण से
मुश्किल

Fungibility= Two conditions must be met simultaneously

दो शर्तें का एक साथ पालन होना चाहिए

BOTH conditions must be met simultaneously 2 शर्तें का एक साथ पालन होना चाहिए

EXAMPLES	Condition#1 Division possible	Condition#2 Mutual substitution possible	IS IT Fungible? $1+2=$
• Currency Note	<input checked="" type="checkbox"/> YES 500x4	<input checked="" type="checkbox"/>	YES
• Diamond	Yes	✋ ✋ Not possible	✋ NO
• Shares, Bonds	NO POSSIBLE.WHY = explain in Pillar1C Sharemarket.		✋ NO



Gold bars are fungible yes or no?



1 bar = 250gm



25 bars x 10 gm
= 250gm



12 lakh rupees



12 lakh rupees

Gold bars



division yes



mutual
substitution
yes

Precious metals' value
depends on WEIGHT.
NOT shape.

कीमती धातुओं की कीमत
उसके वजन पर होती है.
आकार के हिसाब से नहीं

Fungibility= Two conditions must be met simultaneously

दो शर्तें का एक साथ पालन होना चाहिए

BOTH conditions must be met simultaneously 2 शर्तें का एक साथ पालन होना चाहिए

EXAMPLES	Condition#1 Division possible	Condition#2 Mutual substitution possible	IS IT Fungible? $1+2=$
Currency Note, Bitcoins	<input checked="" type="checkbox"/> YES	<input checked="" type="checkbox"/> YES	 YES
Diamond	Yes	  Not possible	 NO
Gold 250gm	<input checked="" type="checkbox"/> YES 25gm x10Nos	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> YES

Suppose a copyrighted Digital image by a wildlife photographer



I'll give ₹2000
To own this photo



Suppose a copyrighted Digital image by a wildlife photographer

If we divide / splice it then



Copyrighted song MP3 File

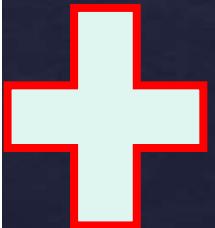


If we divide the song in to smaller parts then?

₹10

CALLER TUNE

हो जय जय
शिवशंकर आज मूँड
है भयंकर रंग उड़ने
दो रंग उड़ने दो



₹0

Middle lines

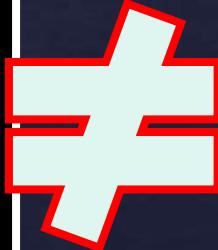
तो आज यार कुछ लम्हों
के लिए बिगड़ी राहों पे
तुम पैरों को मोड़ दो
आज हक से दुनिया को
भूल के जितने है कायदे
वो सारे तोड़ दो



₹0

Middle lines

ऊ खुले ग्राउंड में
आके ऊँचा साउंड
बजा के रेड वाला
कलर लगा के नाचेंगे
हीरो बनकर



Fungibility= Two conditions must be met simultaneously

दो शर्तें का एक साथ पालन होना चाहिए

BOTH conditions must be met simultaneously 2 शर्तें का एक साथ पालन होना चाहिए

EXAMPLES	Condition#1 Division possible	Condition#2 Mutual substitution possible	IS IT Fungible? $1+2=$
Currency Note, Bitcoins, Gold	<input checked="" type="checkbox"/> YES	<input checked="" type="checkbox"/> YES	 YES
Diamond	<input checked="" type="checkbox"/> Yes	  Not possible	 NO
(Image, Meme, Song, MP3, Digital files)	<input checked="" type="checkbox"/>	  Not possible	 NOT Fungible

Then What is NON-FUNGIBLE TOKEN (NFT: गैर-फंजीबल टोकन)



Digitally Stored using blockchain technology with info

Filename ___ Tigerwallpaper.jpeg

Created by ___ Mrunal Patel

Bought by ___ Roman Saini

At price ___ 0.00000005 Bitcoins

On date ___ 31/Feb/2020

Usually **Rupee, Dollar** etc

→ converted to

cryptocurrency like **Bitcoin, Dogecoin** → then NFTs are bought

NON-FUNGIBLE TOKEN for storing physical assets?

क्या इसमें भौतिक संपत्तियों को सुरक्षित कर सकते हैं ?



HOME
Bungalow
Property



Property ownership
Documents



Property ownership
Documents ki PDF

NFT of this Digital
Document

Since you know Bitcoin & Blockchain technology ke Charm-Challenges then NFT Charm-Challenges= self-explanatory.

10.19.3 ♦️🌐 NFT-Charms? (आकर्षण)

- ⇒ 1) Multimedia Creators: Easier to trade digital assets (डिजिटल चिलकार, डिजिटल धुनकार इत्यादि के लिए अपनी कृतियों की बिक्री करना आसान.)
- ⇒ 2) Easier to verify ownership records. Prevent plagiarism. (डिजिटल कृतियों के स्वामित्व की जाँच करना आसान. नकलचियों के लिए जालसाजी करना मुश्किल.)
- ⇒ 3) Cinema / Sports tournament / Travel tickets etc can be stored with ownership records. Helps in Paperless administration. (सिनेमा / खेल / परिवहन की टिकट की बिक्री डिजिटल स्वरूप से करना आसान, कागज़ मुक्त प्रशासन.)

10.19.4 ♦️👻 NFT-Challenges: (चुनौतियां)

- ⇒ 1) Started in 2017 → steep price rise in 2021. Single GIF /meme file selling for millions dollars\$ worth cryptocurrencies. This mass-hysteria / investment-bubble will collapse. Investors will lose money. ये सामूहिक पागलपन /निवेश का गुब्बारा फट जाएगा तब निवेशकों का पैसा डूब जाएगा.
- ⇒ 2) Money laundering & terror Finance. धनशोधन और आतंकी वित्तपोषण में दुरुरूपयोग सम्भव
- ⇒ 3) Maintaining such computer blockchain record → Electricity consumption 🔋 → CO₂ Emissions
डेटाबेस का संचालन/वहन करने में बहूत ज्यादा बिजली खपत होती है, जिससे कार्बन डाइऑक्साइड उत्सर्जन में बढ़ोतरी.)



20 min reading
 40 min video



- I've counter intellectual arguments how all problems of Bitcoin are not in NFTs.
- Bitcoin coin can be used for terror-funding but NFT can't be used for terror funding.
- बिटकॉइन की मदद से आतंकवादी पैसा भेज सकते हैं लेकिन एनर्फटी की मदद से वो नहीं भेज पाएंगे ऐसे ही सब इधर उधर की बुद्धिजीवी चर्चा मेरे को करनी है

- Just accept in general sense that bitcoin, NFT = tax evasion, terrorism problem...& move to next topic!
- What's the point of wasting another 10 minutes in that explanation? भाई एक लाइन में स्वीकार करने में आपको क्यों 10 मिनट उसपर चर्चा करके अपना वक्त बर्बाद करना है ?



इतनी पंचात क्यों करनी है, भाई



? MCQ. Find correct statements abt Non-Fungible Tokens (NFTs) (Prelims-2022)

1. They enable the digital representation of physical assets.
2. They are unique cryptographic tokens that exist on a blockchain.
3. They can be traded or exchanged at equivalency and therefore can be used as a medium of commercial transactions.

Codes: (a) 1 and 2 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2 and 3

PYQ- MCQ related to Bitcoin NFT
= do it in the Wednesday Quiz.

If people make silly mistakes, I'll explain it in
Thursday class

Let's start economy: Pillar#1: Money, Banking, Finance, Insurance

A-1

- Money: barter to Bitcoin

A-2

- RBI's monetary policy
- CRR, SLR, Repo etc

B-1

- Classification of Banks-NBFC

B-2

- Burning issues in Banking sector
- NPA, IBC, BASEL...

C

- SEBI Sharemarket

D

- Insurance, Pension, Fin. Inclusion



1) MBFI



2) Budget



3) Intl. Trade



4) Sectors of Economy

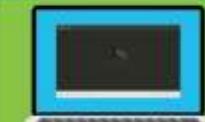


5) Infrastructure



6) HRD

Audio/Video
Problem?



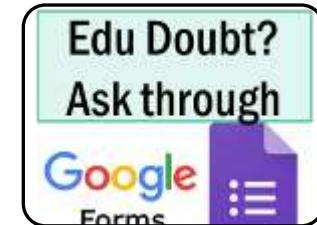
CTRL

R

Edu Doubt?
Ask through

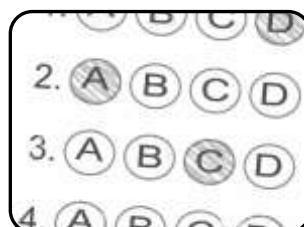


PLAN FOR NEXT WEEK: अगले हफ्ते का कार्यक्रम



Google Form FAQ

- Whatever doubts received in google form till Monday 9AM:
- Ans in a PDF file in course page → update section
- **ON Wed 10PM , depending on volume of querries**



Wednesday 9PM:

- Weekly Economy Quiz upto what we learned this week



Thursday: Next Handout by 7PM



Thursday onwards 9PM

- LIVE Classes.

Mo	Tu	We	Th	Fr	Sa	Su
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	1	2	3	4	5
6	7	8	9	10	11	12