



Student Engagement & Mentoring in Technology

# Bitcoin

A New Kind of Money

What it is, how it works, and why it matters

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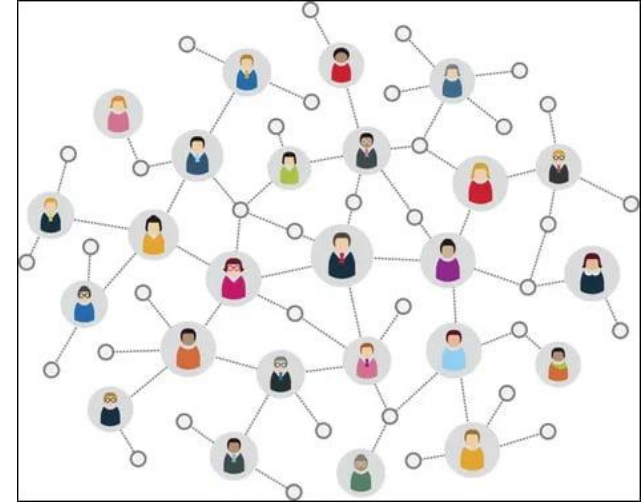


# What is Bitcoin?

- Bitcoin is a type of **digital money** (cryptocurrency)
- Created in **2009** by an unknown person called **Satoshi Nakamoto**
- Not printed or backed by any government
- Can be used to **buy things, send money, or invest**



# How is Bitcoin Different?



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Bitcoin	Traditional Money
Digital only	Physical & digital
No central bank	Controlled by banks/government
Public ledger (blockchain)	Private bank records
Global & borderless	National currency

# What is Blockchain?

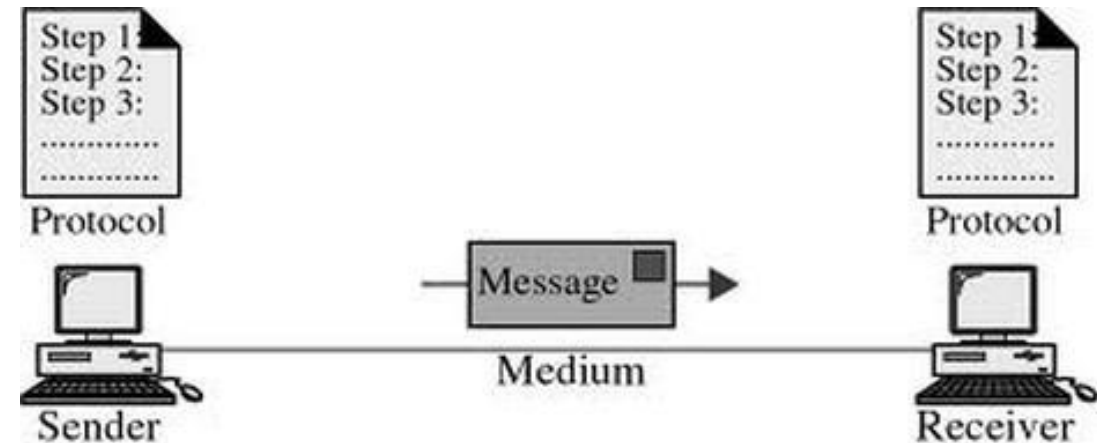
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- A **blockchain** is a digital ledger (like a notebook)
- It stores **every Bitcoin transaction ever made**
- Each "page" is a **block** of transactions
- Blocks are **linked together** — can't be changed once written



# How a Bitcoin Transaction Works

1. You send Bitcoin from your wallet to someone else's address
2. The transaction is **signed** using your private key
3. It is **broadcast** to the Bitcoin network
4. **Miners** confirm it and add it to the blockchain
5. The other person receives it!



# What are Bitcoin Wallets?

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A wallet stores your **private and public keys**

Think of it like:

- **Public key = your address**  
(where people send you Bitcoin)
- **Private key = your password**  
(used to send Bitcoin)
- Never share your private key!



# What is Bitcoin Mining?

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Miners use computers to:

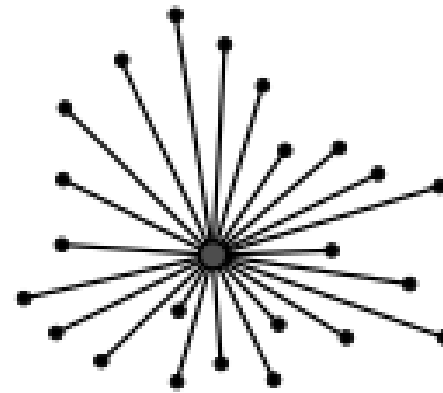
- Solve hard puzzles
- Verify transactions
- Add new blocks to the blockchain
- The first miner to solve the puzzle **wins Bitcoin**
- This is called **Proof of Work**



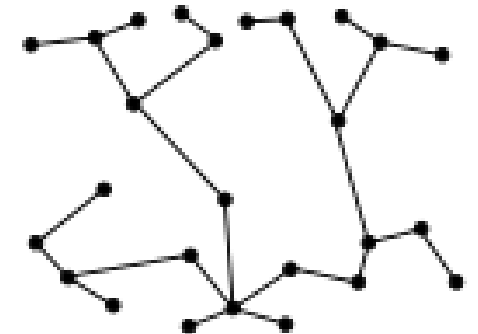
# Who Controls Bitcoin?

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- No one person or company controls it
- It's **decentralized** — powered by computers all over the world
- Anyone can participate by:
  - Running a Bitcoin node
  - Joining a mining pool



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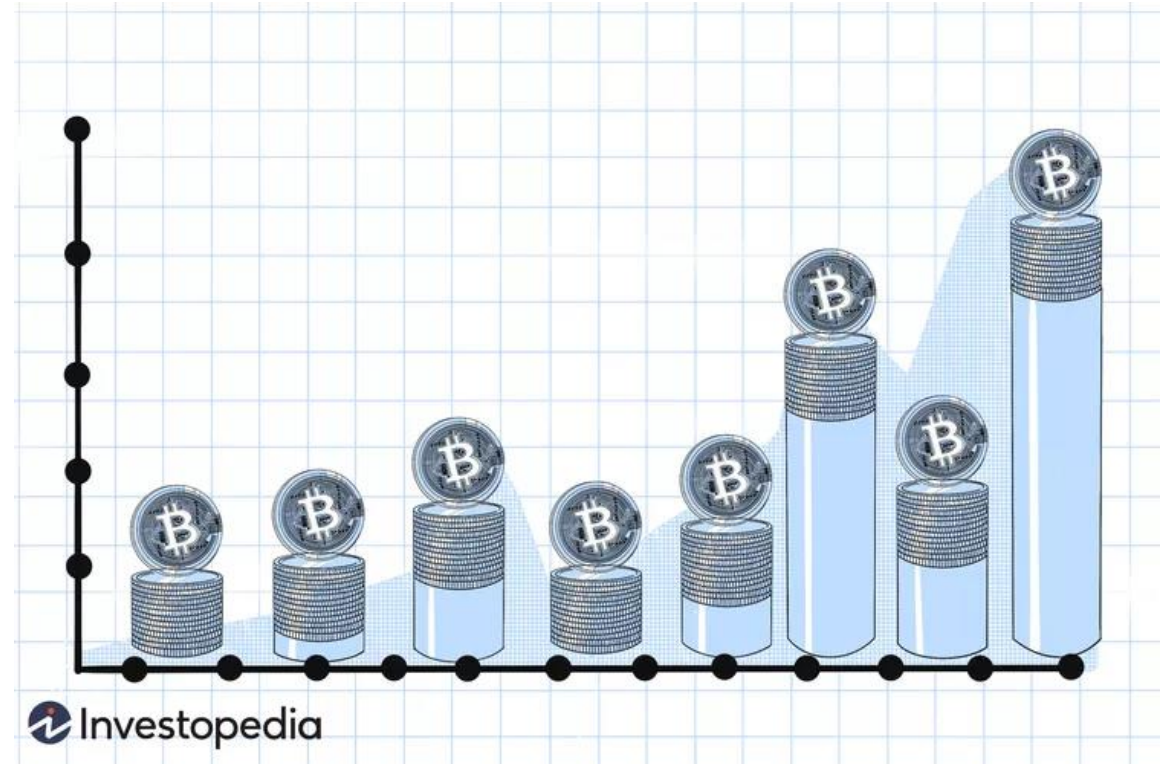
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# Why Do People Use Bitcoin?

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- Fast, borderless payments
- Lower fees than banks
- Privacy (no names in transactions)
- Investment (like digital gold)



# Pros and Cons of Bitcoin

✓ Pros	✗ Cons
Decentralized	Volatile price
Transparent	Energy use
Fast and global	Can be used anonymously (for bad uses)
Limited supply (21M)	Complex for beginners



# Optional Activity

## **Classroom Activity – Be the Blockchain!**

- Roles: Sender, Receiver, Miners, Network
- Use paper wallets and “puzzle cards”
- Add transactions to the class blockchain board

# Quiz / Review Questions

What is a Bitcoin wallet?

What is the purpose of miners?

What makes the blockchain secure?

Who created Bitcoin?

