Financial Literacy with Mr. 401(k)
Winter Term 2024 - 2025
January 30, 2025

Exploring Bitcoin

Class 19: Bitcoin Transactions & Business Plan Project

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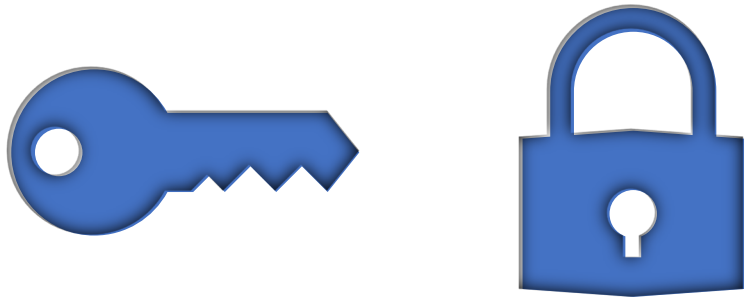
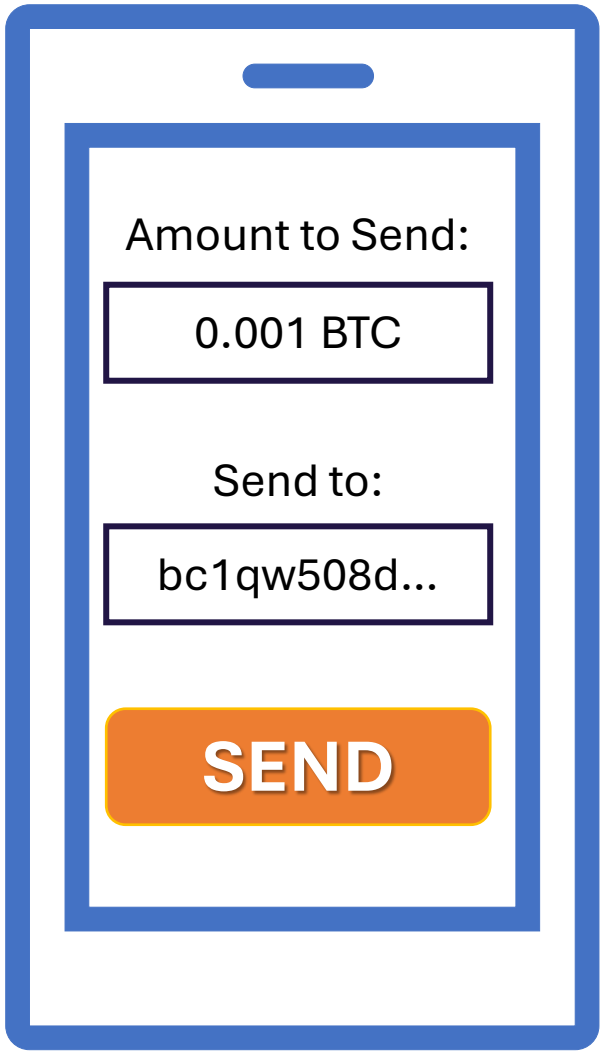
A Bitcoin Transaction: Step-by-Step (1 of 5)

1 Owning Bitcoin

🔑 **To send Bitcoin, you need a private key!**

- Think of your private key like a password that lets you control your Bitcoin.
- Just like a key unlocks a door, your private key unlocks your ability to send Bitcoin.





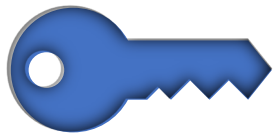
A Bitcoin Transaction: Step-by-Step (2 of 5)

2 Creating a Transaction

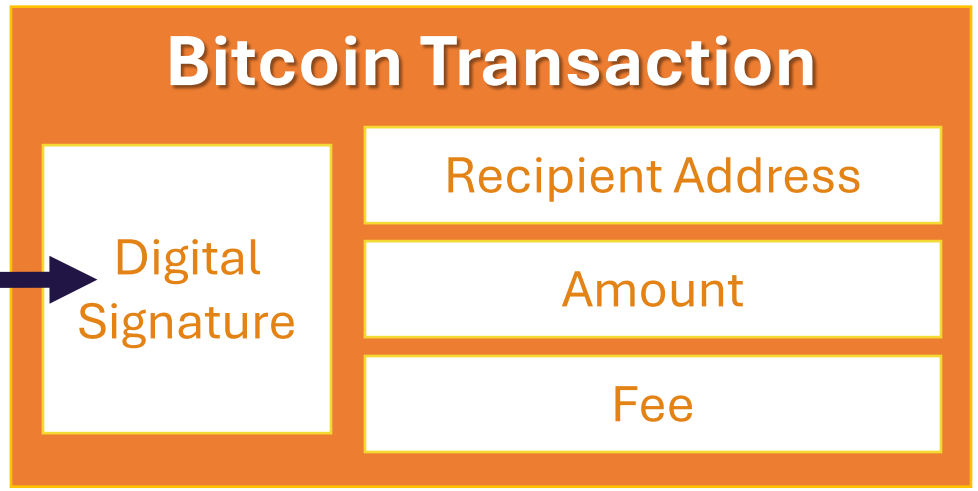
✍️ **Signing a transaction with your private key!**

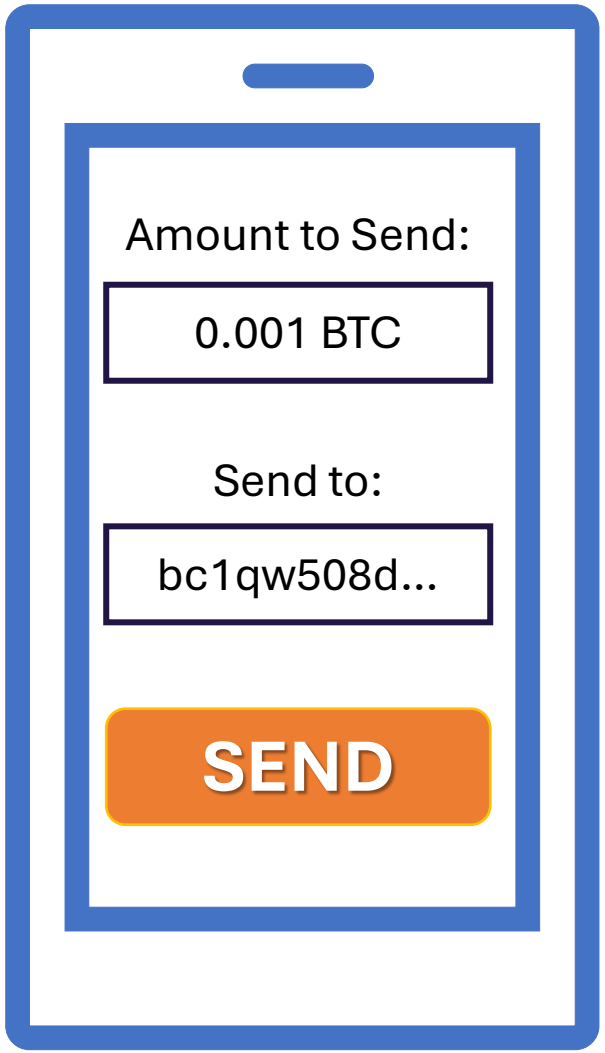
- When you send Bitcoin, your private key creates a digital signature.
- This signature proves the Bitcoin is yours without sharing your private key.

Private Key



Cryptography



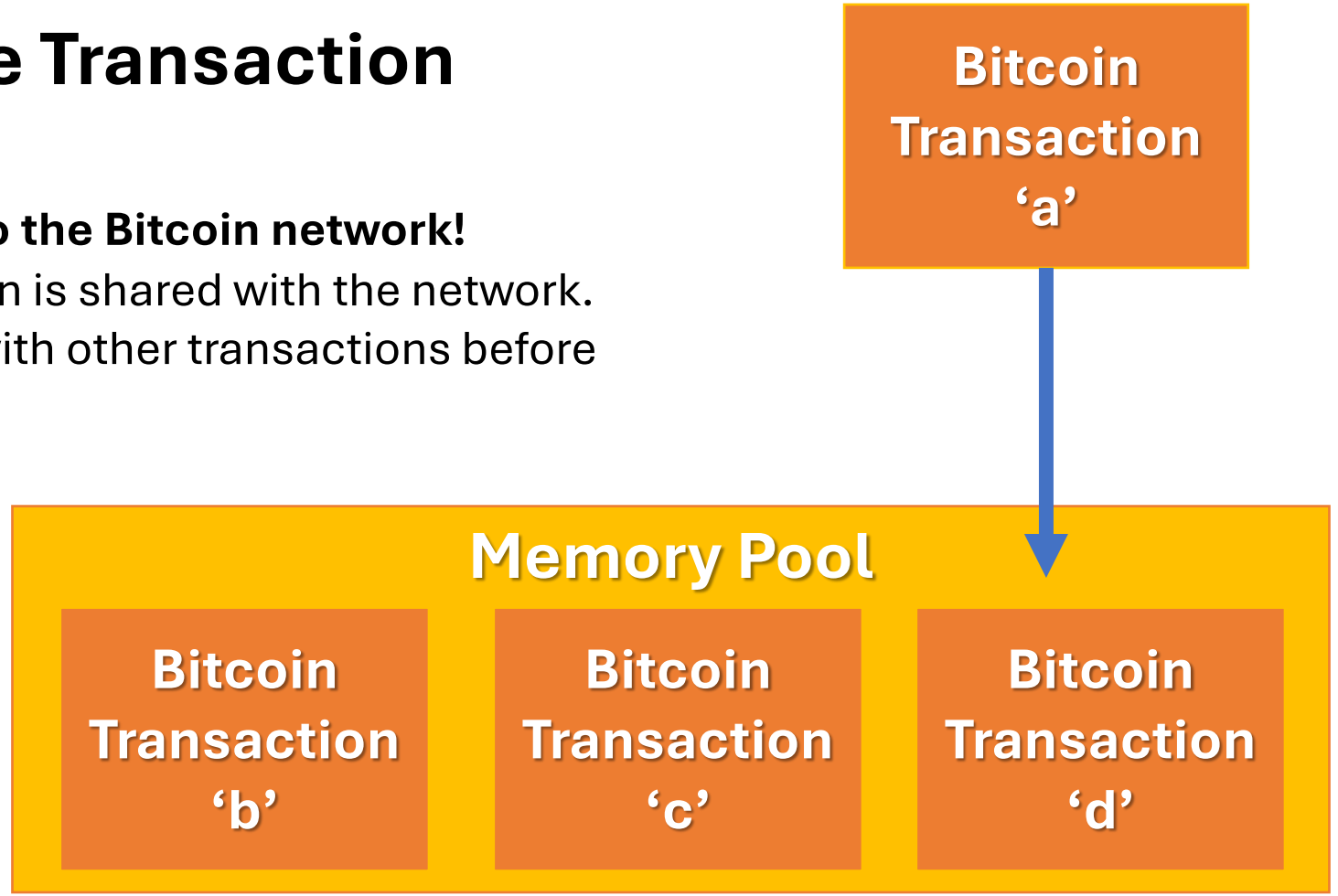


A Bitcoin Transaction: Step-by-Step (3 of 5)

3 Sending the Transaction

Your transaction is sent to the Bitcoin network!

- After signing, your transaction is shared with the network.
- It waits in a "memory pool" with other transactions before getting confirmed.

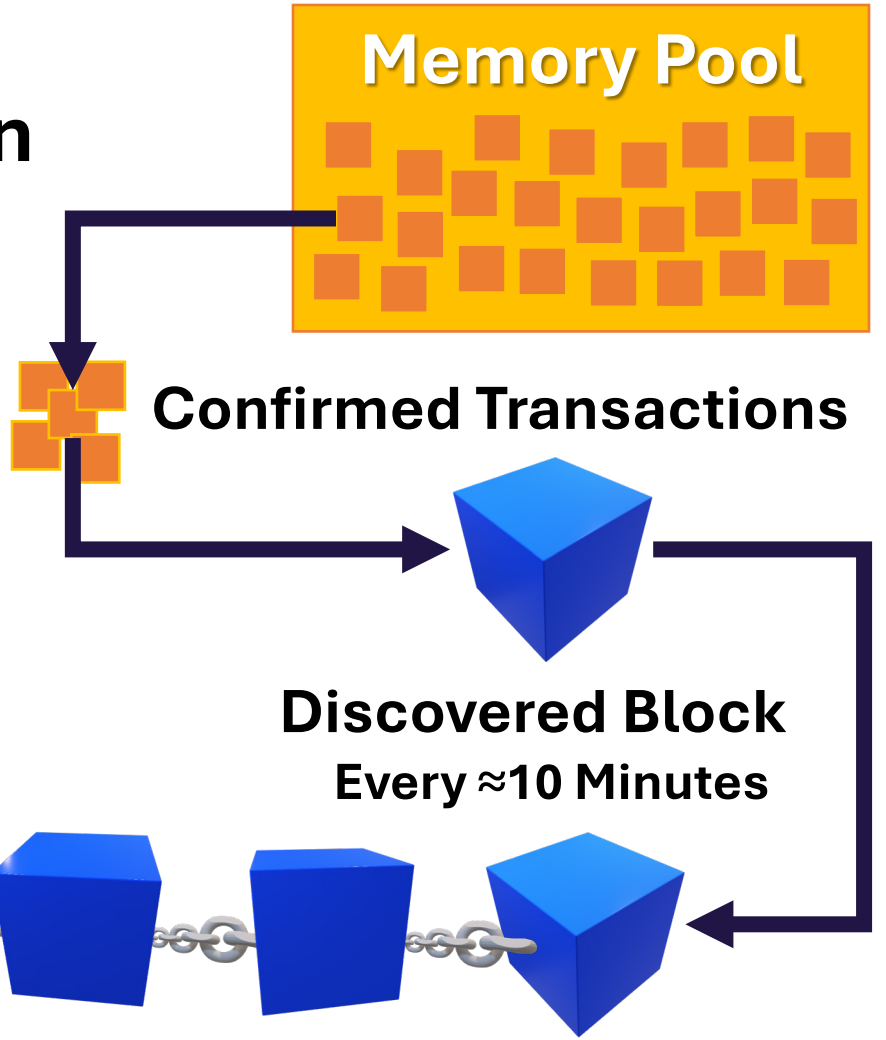


A Bitcoin Transaction: Step-by-Step (4 of 5)

4 Confirming the Transaction

✅ **Your transaction gets added to the blockchain!**

- Miners group transactions together and confirm them.
- Every 10 minutes, new confirmed transactions are added to the permanent Bitcoin record (blockchain).



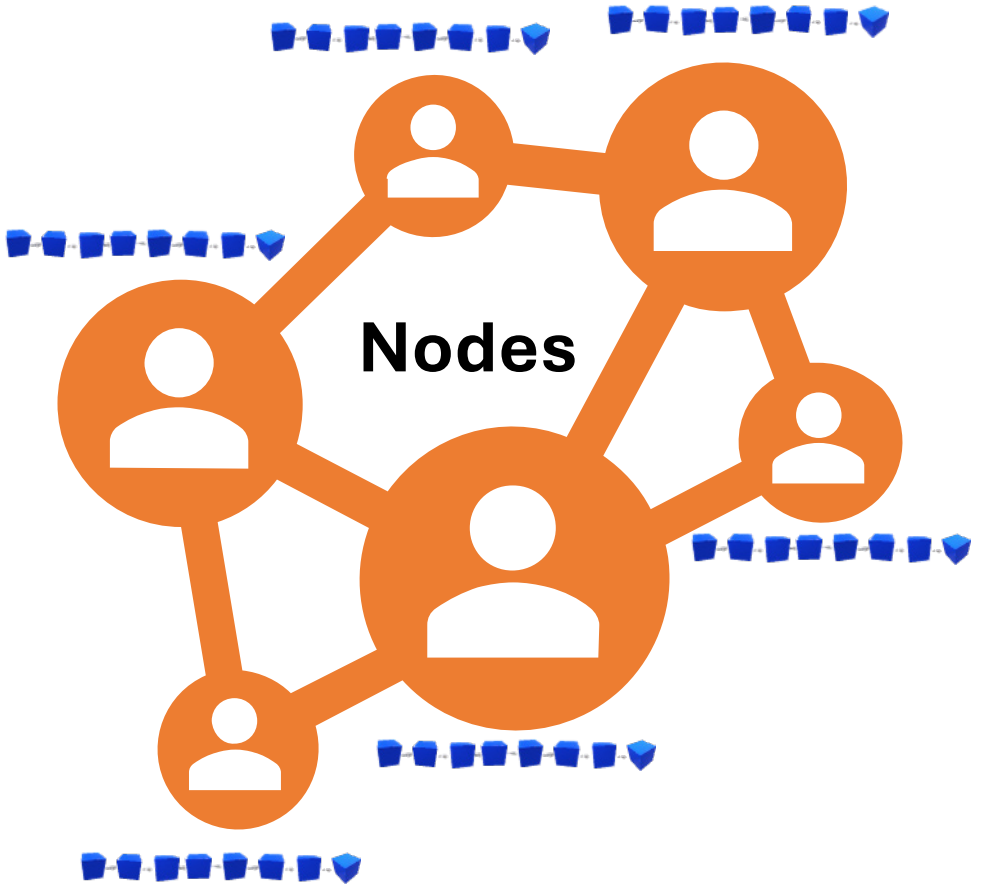
A Bitcoin Transaction: Step-by-Step (5 of 5)

5 Keeping Bitcoin Secure

🌎 **Thousands of computers store Bitcoin's history!**

- Bitcoin is stored across a network of computers (called nodes).
- These computers make sure all transactions are correct and keep Bitcoin secure.

21,683 Bitcoin Nodes*



*https://bitnodes.io as of January 30, 2025


Business Plan
Project

Customers Pay to Resolve a Problem

People part with their money only if they can satisfy a **‘need’** or a **‘want’**

Money Mavericks

Objective: First, give your business a name – you can always change it later as your business plan develops. A good business plan demonstrates how a business idea will be a developed into successful company. Here are some questions to help you get started...

Practical Application

1. Business Identity

- What is your business name?
- Design a logo for your business. (Optional but encouraged!)
- What is your business's mission? (What problem does it solve? Why does it exist?)
- What is your business's vision? (Where do you see your business in the future?)

2. Products & Services

- What products and/or services does your business offer?
- What makes your product or service valuable to customers? (What problem does it solve or what needs or wants does it fulfill?)

3. Target Market & Customers

- Who are your business's target customers? (Age?interests?location?etc¡)
- Where will customers find your business? (Online?in.a.store?at.events?etc¡)

4. Products & Services

- How does your business earn money? (Sales? subscriptions?services?etc¡)
- How much will you charge for your products or services? How did you decide on these prices?
- How many products or services do you need to sell to cover your costs? (Break_even.point)

Practical Application

5. Costs & Expenses

- What are the costs to start your business? (Supplies, materials, website, etc.)
- Where will your business's startup costs come from? (Savings, investors, fundraising, etc.)
- What are your business's ongoing expenses? (Rent, supplies, marketing, employee wages, etc.)

6. Competition & Differentiation

- Who are your main competitor(s)?
- What makes your business different from the competition?
- Why would customers choose your business over a competitor?

7. Marketing & Customer Engagement

- How will your business promote its products and/or services? (Social media, flyers, ads, word of mouth, etc.)
- How will you attract new customers and keep them coming back? (Special deals, loyalty programs, great customer service, etc.)

8. Team & Responsibilities

- Who are the members of your business team?
- What roles and responsibilities will each team member have? (Who is in charge of marketing, finances, operations, etc.?)

Practical Application

9. Challenges & Risks

- What are some possible challenges your business might face? (Competition, cost overruns, customer interest, etc.)
- How will your business overcome these challenges? (Backup plans, strategies, adjustments, etc.)

10. Business Pitch

- Write a short “elevator pitch” that describes your business to potential customers. *(This should be a persuasive and engaging summary.)*

Three Key Takeaways

1. Bitcoin transactions require a private key, like a digital password, to send Bitcoin securely.
2. Bitcoin transactions go through multiple steps—broadcasting, waiting, and confirmation—before being permanently recorded on the blockchain.
3. Bitcoin is decentralized, meaning thousands of computers (nodes) keep copies of all transactions to ensure security and accuracy.

Where to Learn More

- Bitcoin Education by Petros Koumantaros
- Bitcoin Money: A Tale of Bitville Discovering Good Money by Michael Caras (Author), Marina Yakubivska (Illustrator)
- The Bullish Case for Bitcoin by Vijay Boyapati