



Implementation of a Lightweight Bitcoin Client

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What is Bitcoin?

- Digital Currency
- Peer-to-Peer
- Classified as decentralized by U.S. Treasury
- Transactions are public, stored in blocks
- Sequential blocks make up a blockchain



Why use Bitcoin?

- Fast
- Decentralized
- Can be anonymous
- Self control over funds



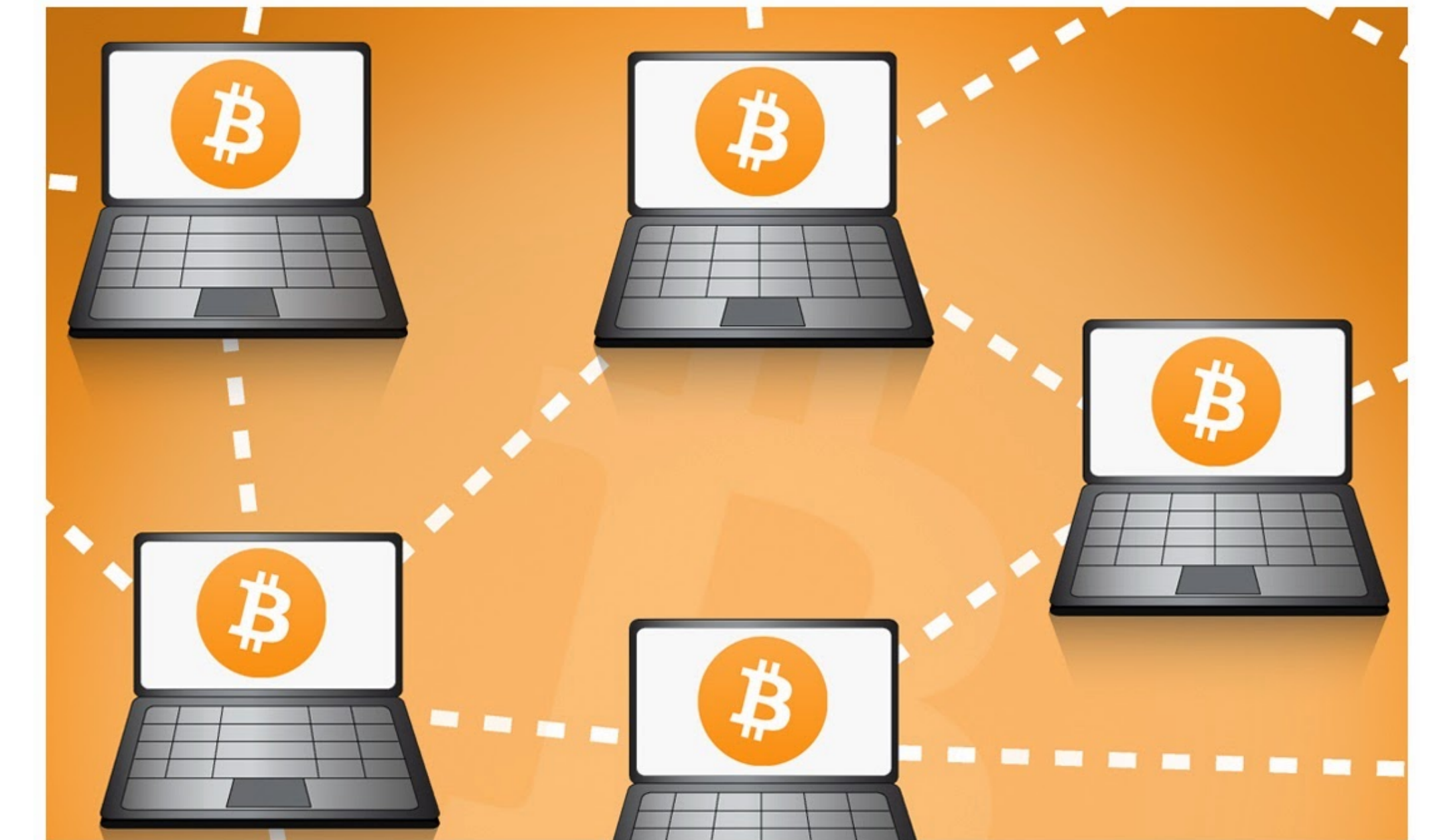
Types of Clients

- Full Node
 - Records every Transaction in a Block
 - Records every Block on the Blockchain
 - Uses computation algorithms for transaction verification
- Lightweight Node
 - Records on the Transactions it needs
 - Records only the most recent Blocks on the Blockchain



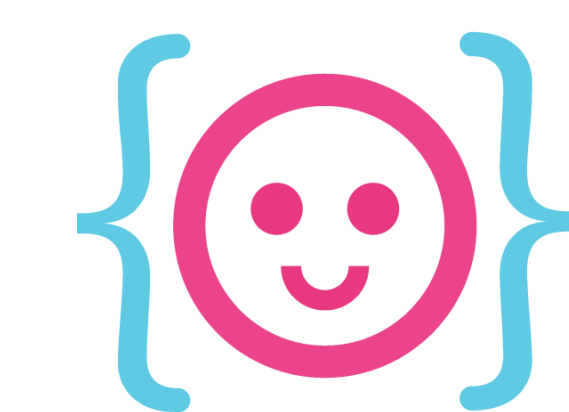
More about Lightweight Clients

- Generally records the last 2000 Blocks
- Relies on Full Nodes to verify new blocks
- Relies on Full Nodes to verify transactions
- Cuts down required hard drive space
 - Full Nodes are at 130GB, Lightweight Nodes are around 650KB



How we Implemented Ours

- Utilized a Java Library called BitcoinJ
- Created a simplified wallet with login capabilities
- This wallet allowed users to send and receive bitcoins via their unique address
- Allowed users to view the current blockchain and a some of it's information



View our Code!

<http://bit.ly/BitcoinSeniorProject>

Acknowledgements

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