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

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

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 some of its information

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

Why use Bitcoin?
- Fast
- Decentralized
- Can be anonymous
- Self control over funds

View our Code!

Acknowledgements
This project was sponsored by Professor Seth D. Bergman of the Rowan University Computer Science Department.