ASSIGNMENT: Blockchain Tech [Afternoon]

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Summary of Bitcoin and Blockchain:

In his whitepaper, Satoshi Nakamoto [1] introduces Bitcoin as a digital cash system that works without banks or other trusted middlemen. The problem with traditional online payments is that they always depend on financial institutions to approve transactions. This dependence increases fees, slows the process, and makes payments vulnerable to fraud, mistakes, or even government control.

Bitcoin solves this problem by creating a system where people can send money directly to each other, anywhere in the world, without needing permission from a third party. The technology behind Bitcoin is the blockchain, which is like a public digital record book. Instead of one company or bank keeping the records, many computers around the world share the same copy. When someone sends Bitcoin, the transaction is grouped with others into a "block." Each block is securely linked to the previous one, creating a chain that cannot easily be changed. To add new blocks, participants called "miners" use a process called proof-of-work, which makes it very hard to cheat the system. This prevents the "double-spending problem," where someone might try to spend the same digital money twice. By using blockchain, Bitcoin ensures trust is created through mathematics and shared rules instead of relying on banks.

D. Drescher [2] explains that blockchain is useful far beyond digital currency. It is a transparent, secure, and tamper-proof system that can be used in supply chains, contracts, or identity management.
In Addition, J. Weking [3] blockchain can also reshape business models, enabling new systems like peer-to-peer markets and token-based platforms.

In short, Bitcoin solves the key problem of digital money—trust—by replacing banks with a shared, secure blockchain system. This breakthrough matters because it makes global, low-cost, and censorship-resistant transactions possible while also opening the door to new innovations in many industries.