BLOCKCHAIN TECHNOLOGY
Assignment 2 (Week 1)

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Why Digital Identity on Blockchain?

The management of personal identity in the digital age is fraught with challenges, from data breaches to widespread forgery. It's known that leveraging blockchain technology for digital identity will yield substantial benefits to users, and this fact cannot be argued. Blockchain promises to revolutionise security, authenticity, and efficiency in how we manage our personal data.

Firstly, blockchain introduces an unprecedented level of security by eliminating centralized data repositories. Unlike centralized databases that present a single point of failure, blockchain decentralizes identity information. Users could store their identity attributes in a cryptographic hash while holding the actual data of their passports, degrees, and medical records in their personal digital wallet. So, in order to prove their age or qualification, they would show a valid, time-stamped ID without exposing the actual document. This would greatly lower the risk of mass data theft.

Furthermore, the immutability of blockchain is a powerful tool against forgery, ensuring the authenticity of vital documents. In public services, for instance, the Cambodian government's online platform, verify. gov. kh uses blockchain technology to secure digital documents, such as diplomas, certificates, and ID

cards, making them tamper-proof and verifiable via standard QR codes. This would create a permanent and unchangeable record, allowing users to instantly verify the qualifications and eliminating fraud.

Similarly, in healthcare, patient records could be shared seamlessly between authorised providers with a guaranteed audit trail. This helps protect the integrity of the data and also improves patient safety by ensuring their medical histories are accurate and complete. Additionally, for the travel industry, a digital passport on a blockchain could help streamline border control. Officials would verify credentials against an immutable global ledger, enhancing security while speeding up the process.

In conclusion, I strongly believe that blockchain-based digital identities offer profound benefits for society. By empowering individuals with control over their data and providing a secure, immutable foundation for verification, blockchain can restore trust in our digital interactions. It isn’t just a technical upgrade; however, it’s a foundation for a more secure, efficient, and represents a critical step forward.