**Blockchain Essentials – Assignment 1**

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**Q1. What is your understanding of Blockchain?**

Ans1. Blockchain is a distributed ledger which stores information in a decentralized, immutable and chronological manner using cryptography, thus, reducing the risk associated with a centralized data management setup.

**Q2. What is the core problem blockchain trying to solve?**

Ans 2. Blockchain technology

**Q3. What are the few features which blockchain will give you?**

Ans 3. Blockchain provides a way to store information which is –

1. Decentralized
2. Immutable
3. Verifiable
4. Secure

**Q4. What all things does a block contain?**

Ans 4. Block Number, Transaction records, Previous Block signature/hash, Mining key

**Q5. How is the verifiability of blockchain has been attained?**

Ans 5. Blockchain combines 2 technologies which enable it to ensure data verifiability –

1. Hash function – an algorithm used to convert information stored in a block to fixed-size bit string value. The hash of one block is included in the subsequent block to create its hash such that it forms a chain of blocks connected by the hash of their previous blocks, thus ensuring data immutability.
2. Cryptography - Public Key and Private Key combination is used such that an encryption by one can be decrypted by another and vice versa