**Lets Upgrade Blockchain Essentials Course**

**Assignment for Day 1**

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

Blockchain is an immutable, distributed ledger that holds records of transactions. It is completely based on trust that exists among participants and the system.

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

Blockchain is trying to solve a number of problems.

1. Security: Blockchain is more secure than the traditional database system because it is immutable.
2. Trust : There are multiple copies of the ledger, so everyone has a copy.
3. Backup : Everyone has a copy of the data so data is never lost even incase of a crash.

**Q3. What are the new features Blockchain will give you ?**

Blockchain provides amazing features like decentralization, security, redundancy without increasing storage costs and transparency.

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

A block contains the following

1. Block number
2. Transaction records
3. Previous block signature
4. Mining Key

**Q5. How is verifiability attained in blockchain?**

Each block has its own fingerprint.

A fingerprint is created by combining the previous fingerprint with the current data. This fingerprint is also called the cryptographic hash and is created using SHA256.

The hash/fingerprint is submitted to all the participants for verification and if any participants fingerprint does not match then the other participants share their copy so that the lost data can be refurnished.