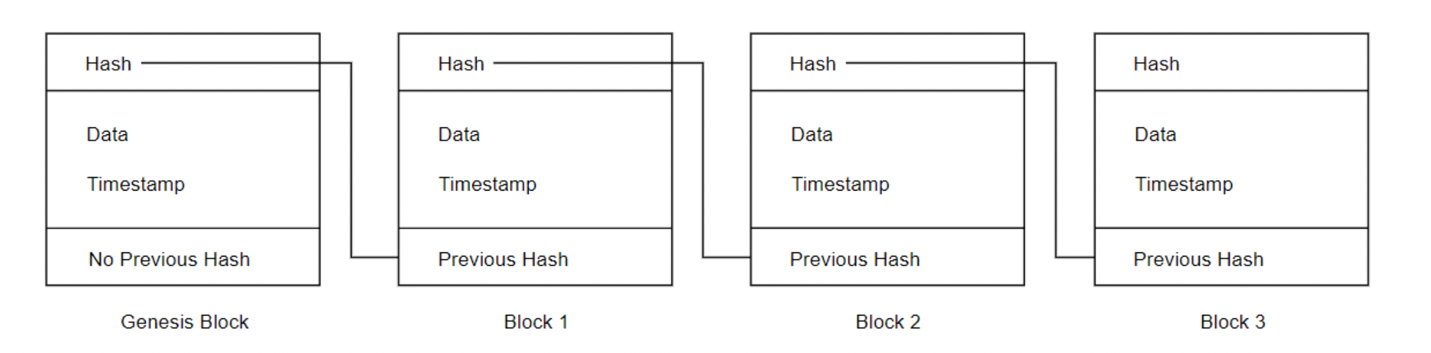
**Introduction:**

Sending messages over insecure channels has always been a security issue. Although there are many technologies to encrypt messages, but there are still ways to attack messages, such as: Eavesdropping, MITM, EFAIL. In many countries, such as Palestine, China and South Korea, citizens are persecuted by the government or the occupation. In addition, traditional applications maintain their data in a centralized database, which is also a problem. Our app ensures decentralization, immutability, censorship resistance and data security. data sent via Users are added directly to the blockchain and a global copy of the data is created in each node. Only legitimate users can do this. This data is accessed using a private key in the blockchain. It removes the need for a trusted intermediary. system complete Decentralizes and allows users to exchange messages securely.

**Disadvantage of central-based communication apps**

1. Central chatting apps collects meta information about the user
2. Confidentiality of a user can be compromised on the request of government
3. Single Point of Failure (SPF): If a single node fails then whole application can be compromised.

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Blockchain is a shared, distributed ledger that facilitates the process of recording transactions and tracking assets in a network. It provides zero intermediary or 3rd party also achieved the security basics, confidentiality integrity and availability. The blockchain Network is collection of nodes and each node has a local copy of the blockchain

The benefits of blockchain-based communications and data storage technology are numerous: a. the stored data can be encrypted making it impervious to theft

b. the data is stored in a distributed manner, eliminating single-point failures

c. communications can be end-to-end encrypted making them spy-proof n

e. transactions and communications can be subject to incorruptible rules enforced by the blockchain itself

f. the system maintains a tamper and repudiation-proof history of past transactions and communications.

How to build the decentralize chat app

Ethereum is a platform allow the developers to develop dapp using smart contract,

Smart contract: an agreement, contract, or set of instruction that is deployed on a decentralized blockchain

* Cannot be altered “immutable”
* Automatically executed
* Every on sees the terms of agreement

Anyone can join the network can send transaction through the network and paying small amount of fees the fees may vary from one transaction to another. because it depends on the number of transactions sent in the same time, so paying fees for every message may not suitable for some users but for those who wants a high level of security our project is there right chouse.