

3)Requirements of DApps, Operations of DApps and Example of DApps:

What is DApps:

- A decentralized application (dApp) is a type of distributed open source software application that runs on a

peer-to-peer (P2P) blockchain network rather than on a single computer.

- DApps are visibly similar to other software applications that are supported on a website or mobile device but are P2P supported.

- It enables users to engage in transactions directly with one another as opposed to relying on a central authority.

Requirements:

- For an application to be considered decentralized, it must meet the following criteria.

- The DApp should be fully open source and autonomous, and no single entity should be in control of a majority of its tokens. All changes to the application must be consensus-driven based on the feedback given by the community.

- Data and records of operations of the application must be cryptographically secured and stored on a public, decentralized blockchain to avoid any central points of failure.

- A cryptographic token must be used by the application to provide access and rewards

Operations:

- Decentralization offers various benefits over apps running on a centralized network.

- Chiefly is the lack of a third party, thanks to the innovative smart contract.

- An app like Venmo allows one to send money to anyone, however, moving those funds to a bank account costs a fee. Plus, moving fiat often takes days to arrive.

- Sending money over a decentralized app, however, means there aren't any or very little costs to be paid.

- This saves users money on fees, and considering decentralized transactions are almost instant, it saves them time as well.

- DApps don't run on centralized servers either. An advantage decentralized platforms have is they're invulnerable to all types of attacks, as there's no physical device to target.

- Not only does this make the network more secure, but it also means there's no downtime.

- Accessing these applications is always possible.

- DApps can also apply to almost any industry, such as gaming, medical, governance and even file storage.

- As a result, DApp usage is almost no different from traditional applications.

- While users benefit from all the changes on the backend, the actual experience should be the same.

- This way of interacting with applications is considered Web 3.0, also referring to the decentralization of information.

- Companies then have control over that information, know what their users like to buy, how much money they have and who they know.

- That control also means they can take it away. Enter Web 3.0, where DApp usage doesn't come at the cost of privacy.

- Instead, a user can choose to share only required information for, say, a medical checkup or a loan, and choose who sees it and for how long.

- Companies might pay for this access as well, ensuring that the users also profit from it.

- There's also the problem of trust. In a world where large companies with so-called high security are leaking usernames, emails and passwords, it's hard to trust anyone completely.

Drawbacks:

- While decentralized applications might present a future free of corporations, there are currently some major issues that the industry is working to resolve.

- For one, the lack of a central authority might mean slower updates and platform changes. After all, one party can simply update their app as they please.

- A DApp, however, requires majority consensus from the acting governance — even for a minor bug fix. This could take weeks or even months as users debate the pros and cons of any improvement.

- Also, DApps require a reasonably-sized user base to operate properly. They need nodes, governance and users just to interact with it.

- However, accessing DApps can be quite difficult in this early stage, and many aren't seeing the support they

need.

- In the future, accessing a DApp might be a download away.
- But for now, users must download a DApp-supported browser, send the required crypto to that wallet and interact from there. While tech-savvy users should have no problem with this, the vast majority of people will have no idea where to start.

Exmaples od DApps:

BitTorrent, Tor, and Popcorn Time are applications that run on computers that are part of a P2P network, whereby multiple participants are consuming content, feeding or seeding content, or simultaneously performing both functions.