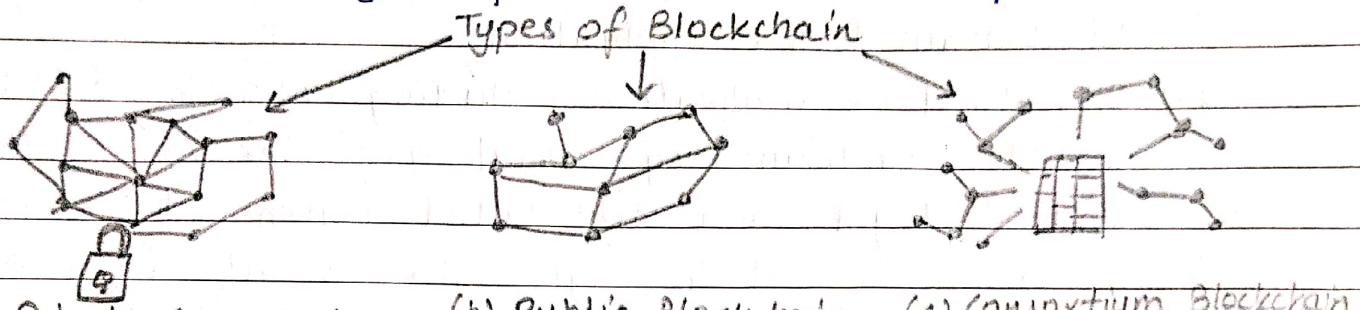
NAME:- AFNAN ATTAR PRN:- F1911 2003 CLASS:- BE COMP II
SUBJECT:- Blockchain Technology ASSIGNMENT:- 01

Q1) Explain various types of blockchain with example.

Ans



(a) Private Blockchain (b) Public Blockchain (c) Consortium Blockchain

a) Private Blockchain:-

1. These blockchains operate on closed network and are useful for private organisation and business.
2. Companies use private blockchain to customize authorization preferences and accessibility, parametess to networks and other security operations.
3. Example:- Enterprise Ethereum allows companies to leverage ethereum-based private chains.

b) Public Blockchain:-

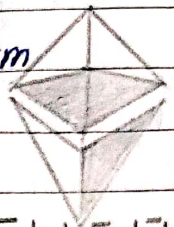
1. Public blockchain are open to public, they are not owned by anyone.
2. Users may or may not be rewarded for their participation
3. Example:- Bitcoins and Ethereum are public blockchains.

c) Consortium Blockchain:-

1. Consortium blockchain have both public and private components, multiple organisations manage single consortium network.
2. Setting up these blockchains is difficult but they offer better security.
3. Hyperledger is an example of a consortium blockchain.

Q2) Write short note on Ethereum. Explain Ether concept in Ethereum.

Ans 1. Ethereum is an open source blockchain platform which allows anyone to develop and deploy blockchain based applications.



2. Any kind of application including tokens, wallets, cryptocurrency, social apps can be developed and deployed in a distributed environment of Ethereum.
3. Ethereum is not a single network but rather it is more like a protocol for inter-network communication.
4. Ether is the native cryptocurrency of the platform, and among the cryptocurrencies ether is second only to bitcoin in market capitalization.
5. There are two types of users in ethereum, one who create the DApp (Decentralized Application) and others who participate in the contract.

Q3) Explain advantages of MetaMask.

Ans Advantages of MetaMask are as follows:-

1. MetaMask made the Ethereum system very accessible to the average consumer without running a full Ethereum node.
2. MetaMask is available on mobile devices as well as a browser extension.
3. It is a free-to-use wallet.
4. It includes integrated exchanges in order to make easy transactions.
5. There is no need to create seperate login credentials.
6. Individuals can restore their MetaMask wallet with their improvement phrase.

Q4) Explain concept of wallet and its usage in blockchain.

Ans 1. A blockchain wallet is a digital wallet that allows users to store, manage and trade their cryptocurrencies.

2. Blockchain wallet helps someone exchange funds easily, transactions are secured as their cryptographically signed.

3. Features of blockchain wallets:-

i) It is just like any other software or a wallet that we use for our day-to-day transaction and hence it is easier to use.

ii) It is highly secure with advance cryptography.

iii) Allows instant transactions across geographies.

iv) The transaction fee is much lower compared to traditional banks.

v) Transactions are allowed across multiple cryptocurrencies.

Q5) Explain in detail about Ether observed through Etherscan.

Ans 1. Etherscan is the most trusted tool for navigating through all the public data on the Ethereum blockchain and is also called as "Ethplorer".

2. This data includes transaction data, wallet addresses, smart contracts and much more.

3. Etherscan allows users to view the assets held on any public Ethereum wallet address.

4. With Etherscan users can:-

i) Calculate Ethereum gas fee.

ii) Lookup and verify smart contracts.

iii) View the crypto assets held in or associated with a public wallet address.

iv) Observe live tranpactions.

v) Look up a single transaction made from any Ethereum wallet.

vi) Revoke and review access to a wallet for any DApp.

NAME :- AFNAN ATTAR PRN :- F1911 2003 CLASS :- BE COMP II SUBJECT :- BT ASSIGNMENT :- 2

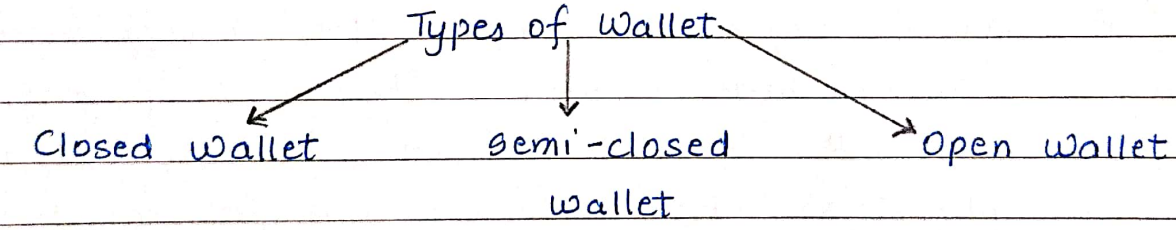
Q1) Explain steps for creating wallet in MetaMask.

Ans Steps for creating wallet in MetaMask are as follows :-

1. Download MetaMask wallet by visiting metamask.io/ .
2. Click on the MetaMask extension and click on "Get Started".
3. Click on "Create a Wallet" and on the next window click on "I agree" if you would like to improve MetaMask or click on "No Thanks" to proceed.
4. Create a strong password for your wallet.
5. Click on "Click here to reveal secret words" to show the seed phrase. Store the seed phrase securely. Don't share it.
6. Confirm your secret backup phrase by clicking on each word in the order in which the words were presented.
7. That is it!, we have set up our MetaMask Wallet succesfully.

Q2) List and explain types of wallets available in market.

Ans



I] Closed Wallet :-

1. A company selling products and/or services can develop a closed wallet for customers.
2. Users of a closed wallet can use the funds stored to make transactions with only the issuer of the wallet.
3. Example of closed wallet :- Amazon Pay.

II] Semi-closed wallet :-

1. A semi-closed wallet allows users to make transactions at listed merchants and locations.
2. Although the coverage area of such wallets is restricted, both online and offline buying can be done through wallets.

III] ~~Closed~~ Open Wallets :-

1. Banks or institutes partnered with banks issue open wallets.
2. Users with open wallets can use them for all transactions allowed with semi-closed wallet in addition to withdrawal of funds from banks and ATMs and transfer of funds.

Q3) Explain meaning of security phrase used while creating wallet.

Ans 1. A security phrase is a group of random words generated by the cryptocurrency wallet that allows users to access the crypto stored within.

2. The words generated are derived from a list of 2048 words, a seed phrase is made up of a long string consisting of a group of random words.
3. A recovery phrase is a crypto wallet recovery password. The recovery phrase is used for the recovery of a crypto currency wallet in case the owner forgets their password.
4. A crypto seed phrase in the wrong hands can do damage so it is advisable to always ensure it is safe.
5. Losing a seed phrase is really the worst-case scenario for a cryptocurrency owner. One cannot recover a wallet seed in case they lost or forgot it.

Q4) What unique identification is given to wallet explain in detail.

Ans 1. Wallets are uniquely identified using addresses that are 26-35 numerals and characters long.

2. A wallet address is ideally a one-time link generated by wallet.
3. These addresses are needed to send or receive digital assets.
4. For example :- Bitcoin genesis address :- 1A1zP1eP5Q.....
5. Address can be created for free by anyone and within matter of seconds without needing a thrid party.
6. We can freely share our public address with others.

Q5) Explain advantages of wallet creation in blockchain.

Ans I] Simplicity and ease of use :-

1. It is extremely simple and straightforward to use a crypto wallet.
2. We can handle several cryptocurrencies with ease.

II] An option for the long run :

1. It takes time and multiple phases of research for enhancements on technical advancements to evolve.
2. Crypto wallets can be a long-term alternative.

III] Account and transaction confidentiality :-

1. Anyone should be concerned about the general security of their crypto wallet.
2. A highly secure sign-in procedure is usually implemented.

IV] Portfolio Management :

1. One can get a realtime glimse of all assets and possessions if we use one of such wallets.
2. This helps in planning and making better financial decisions.

Q6) What is crypto currency? Explain with example.

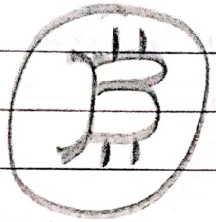
Ans 1. A cryptocurrency is an encrypted data string that denotes a unit of currency.

2. It is monitored and organized by a peer-to-peer network called a blockchain.

3. Unlike physical money, cryptocurrency is decentralized which means they are not issued by government or any financial institutions.

4. Cryptocurrencies are created through cryptographic algorithms that are maintained and confirmed in a process called mining, where a network of computers or specialized hardware such as application-specific integrated circuits process and validate the transactions.

5. For example: Bitcoin.



Bitcoin

6. Bitcoin is a decentralized digital currency that can be transferred on the peer-to-peer bitcoin network.

7. Bitcoin transactions are verified by network nodes through cryptography and recorded in public distributed ledger called blockchain.

8. Todgy as of 19th September 2022 the price of one bitcoin is 15,22,300 Rs only.