Web3 & Blockchain Essentials

## Web3 :

* Web3 is the third generation of the internet (dApps)
* It is blockchain technology, and user ownership of data.
* Web2 (centralized services like Facebook or Google)

## MetaMask

MetaMask is a cryptocurrency wallet .It helps users to send/receive ETH, manage tokens, and connect with decentralized applications (dApps).

## dApp (Decentralized Application)

A dApp is an application that runs on a blockchain network instead of centralized servers. It is open-source.

## Solana

Solana is a high-performance blockchain platform known for its speed and low transaction fees. It supports smart contracts and dApps, its currency is SOL.

## Phantom

Phantom is a crypto wallet and browser extension similar to MetaMask, but for the Solana blockchain. It lets you store SOL tokens, manage NFTs, and connect to Solana dApps securely.

## Ethereum

Ethereum is a decentralized blockchain platform that enables the creation of smart contracts and decentralized apps (dApps). It uses Ether (ETH) as its currency.

## SOL / ETH

SOL: Native token of the Solana blockchain. Used to pay fees and interact with dApps on Solana.  
ETH: Native token of Ethereum. Used to pay gas fees and power dApps on Ethereum.

## NFT (Non-Fungible Token)

An NFT is a unique digital asset stored on the blockchain. It can represent art, music, in-game items, or any digital content.

Solidity:programming language for ethereumfor smart contracts

**Rust:** programming language for Solana for smart contracts.

## Minting an NFT

Minting is the process of creating an NFT and recording it on the blockchain. Once minted, the NFT becomes a permanent.

Taking photo----> uploading in blockchain ------> giving name----->saving in wallet.

## Smart Contract

A smart contract is a self-executing program stored on the blockchain. It automatically executes actions when predefined conditions are met, without the need for intermediaries.

* Understood the difference between **Ethereum** and **Solana.**
* Got familiar with terms like **smart contracts, decentralization**, and **tokens (ETH, SOL).**
* Installed chrome extensions of phantom,metamask.
* Installed and explored **Phantom wallet,** which is used to interact with the Solana blockchain like how MetaMask is used with Ethereum.