

SPPU-BE-COMP-CONTENT - KSKA Git

BT

classmate

Date :

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ASSIGNMENT-3

Q1

Write:

- Remix IDE (online tool for writing Solidity)
- VS Code with Solidity extension.
- Frameworks like Truffle, Hardhat, Brownie.

Compile:

- Remix built-in compiler
- Solc (Solidity compiler)
- Hardhat / Truffle compilers

Deploy

- Directly via Remix + Metamask
- Truffle Migrations Scripts
- Hardhat deploy Scripts
- Local testing on Ganache / Hardhat Network

Q2

- ERC-20 is Ethereum token standard for fungible tokens.
- Ensured all tokens follow the same rules, so wallets Dapps can interact easily.
- Core functions:
 - totalSupply() → total tokens
 - balanceOf() → balance of user
 - transfer() → send tokens
 - approve() & allowance() → give permission to spend.
 - transferFrom() → transfer via approved spender.
- Events: Transfer, Approval
- Ex: USDT, DAI, LINK.

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Q3

- A testnet is separate blockchain network used for testing smart contract.
- Works like mainnet but uses free test tokens.
- Helps developers deploy, test & debug without real money.
- How it works:
 - Add testnet in metamask.
 - Get test Ether from faucet.
 - Deploy & test contracts safely.
- Examples:
 - Active: Goerli, Sepolia
 - Old: Ropsten, Rinkeby, Kovan
 - Other chains : Polygon Mumbai, BNB Testnet, Avalanche Fuji