What is a Decentralized Exchange (DEX)?

What is a DEX exchange?

DEX (short for **Decentralized Exchange**, or **decentralized exchange**) is a type of cryptocurrency platform for trading digital assets that operates without a central governing authority or intermediaries. Unlike traditional centralized exchanges (CEX, such as Binance or Coinbase), where funds are stored on the company's servers, a DEX allows users to trade directly with each other through smart contracts on a blockchain (for example, Ethereum, Solana, or BNB Chain). This is a key part of the DeFi (decentralized finance) ecosystem, where control over assets remains entirely with the user.

How does a DEX work?

- **Wallet connection**: You connect your crypto wallet (e.g., MetaMask or Trust Wallet) to the platform. The exchange does not store your funds — all transactions occur peer-to-peer (from user to user).
- **Smart contracts**: Exchanges are recorded in the blockchain code, ensuring transparency and automation. There is no need for verification or KYC (Know Your Customer) on most platforms.
- **Trading models**:
  - **AMM (Automated Market Maker)**: The most common type — uses liquidity pools. Users add token pairs (e.g., ETH/USDT) to the pool, and the price is formed by an algorithm based on the asset ratio. Examples: Uniswap, PancakeSwap.
  - **Order books**: A rare type where orders (buy/sell requests) are stored on the blockchain.
- **Cross-chain trading**: Many DEXs (like Osmosis) support exchanges between different blockchains.

Advantages of a DEX

- **Security and privacy**: No risk of hacker attacks on centralized storage (as in the case with FTX in 2022). Your keys, your coins.
- **Anonymity**: Trading without registration and KYC.
- **Access to rare tokens**: Easy to trade new or niche assets without formal listing.
- **Earning on liquidity**: By providing assets to pools, you earn fees and rewards.

Disadvantages of a DEX

- **Complexity for beginners**: Requires an understanding of blockchain, gas fees (which can be high on Ethereum), and smart contract risks (code vulnerabilities).
- **Limited liquidity**: On less popular pairs, prices can fluctuate significantly (slippage).
- **Support**: No 24/7 assistance — everything is on you.
- **Regulatory risks**: Restrictions may be introduced in some countries in the future.

Popular DEX examples

Exchange	Blockchain	Features	Governance token
Uniswap	Ethereum	AMM for ERC-20 tokens, simplicity	UNI
PancakeSwap	BNB Chain	Low fees, farming	CAKE
Curve Finance	Multi-chain	Specialization in stablecoins	CRV
Osmosis	Cosmos	Cross-chain exchanges	OSMO
SushiSwap	Multi-chain	Uniswap fork with additional yield	SUSHI

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