



KIDS & TEENS FREELANCING TRAINING INSTITUTE

Blockchain Development Course Outline

Module 1: What is Blockchain?

- What does "Blockchain" mean in simple words?
 - Real-life example: passing notes in class that no one can secretly change
 - Why blockchain is important: safety, trust, and no middleman
 - How blocks and chains work together to store information
 - Main features: decentralized, secure, transparent
 - Fun comparison: Blockchain vs. traditional record-keeping
 - Activity: draw a block and connect it to others to form a chain
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Module 2: How Data Works in Blockchain

- What is a block? What does it store?
 - What is a hash? (explained like a fingerprint for each block)
 - Real-life example: LEGO blocks that lock only in one exact spot
 - How blocks are linked and why they can't be changed
 - Activity: simulate a fake chain and see how a small change breaks the chain
 - Why trust in blockchain comes from the technology itself
 - Introduction to consensus (how everyone agrees on data)
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Module 3: Smart Contracts – Rules Written in Code

- What is a smart contract?
 - Real-life example: a vending machine that gives you a snack only if you pay
 - Why smart contracts are better than paper agreements
 - Introduction to Solidity (the coding language for Ethereum)
 - Activity: write a simple smart contract that gives out points
 - How smart contracts are used in games, apps, and more
 - Benefits: no need for third parties, less fraud, automatic rules
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Module 4: Building with Ethereum – A Popular Blockchain

- What is Ethereum and how is it different from Bitcoin?
 - Real-life example: Ethereum is like a giant computer everyone can use
 - How apps (called DApps) are built on Ethereum
 - Introduction to Ether (ETH): Ethereum's currency
 - Activity: explore a real DApp or blockchain game
 - Understanding wallets and how users connect to apps
 - How Ethereum helps build a new internet (Web3)
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Module 5: Creating DApps – Decentralized Apps

- What are DApps and how are they different from regular apps?
 - Real-life example: group project where no one is the "boss"
 - How frontend (React) connects to the blockchain backend
 - Introduction to tools like MetaMask, Hardhat, Remix, and Ethers.js
 - Activity: create a simple DApp that sends a message to the blockchain
 - What is Web3 and how it makes the internet more user-owned
 - Fun comparison: Traditional apps vs. DApps
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Module 6: NFTs & Tokens – Digital Stuff You Can Own

- What are NFTs (Non-Fungible Tokens)?
 - Real-life example: owning a rare Pokémon card online
 - What are tokens and how they're used in apps and games
 - How NFTs prove digital ownership
 - Activity: design and mint your own mock NFT
 - Understanding ERC-20 and ERC-721 standards
 - How tokens and NFTs power new economies
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Module 7: Security & Gas – Making Blockchain Work Right

- What is gas in blockchain? (cost to run actions)
- Why blockchain needs energy to process things
- Real-life example: paying a tiny toll to send a message
- What is a private key? Why keeping it safe is super important
- Activity: simulate sending ETH and paying gas
- How blockchain keeps data secure from hackers
- Why secure coding matters in smart contracts

Module 8: Blockchain in Real Life & Your Future

- Where blockchain is used: games, banking, voting, art
 - Real-life examples: Axie Infinity, OpenSea, decentralized finance (DeFi)
 - Blockchain careers: smart contract developer, DApp creator, Web3 engineer
 - Skills you can learn now: Solidity, JavaScript, security basics
 - Fun drawing: design your dream blockchain game or app
 - How blockchain helps create a more open and fair internet
 - Future of blockchain: more power to creators, users, and communities
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Bonus Materials:

- Interactive quizzes and coding mini-games
- Beginner tools: Remix IDE, MetaMask, CryptoZombies
- Printable Blockchain Glossary for Kids
- Group project: Build a basic DApp with friends
- Official Certificate of Completion