Ethereum

Main difference with Bitcoin

# Ethereum v 1.0

**Main differences:**

* Programs can be stored on the blockchain
* Apparition of **smart contract**: piece of code that run on the blockchain and are guaranteed to produce the same result for everyone run them
* Creation of dApps (DeFi, Gaming) without any downtime, fraud, control or interference from a third party
* Non-Fungible Tokens (**NFTs**)
* 12/14 seconds to mine a block
* Current mining reward: 2ETH + gas fees + **uncle block**

**Uncle block:** is similar to orphan block during bitcoin blockchain forks. It is valid block that isn’t included in the blockchain due to 2 miners finding the solution almost instantaneously. In the Ethereum they are 2 types of rewards for miners:

* Uncles Reward is awarded to the miner that **creates an uncle**. The value of reward depends on how old the uncle block before it is included in the blockchain: max 1.75 ETH. The older the block is the lower the reward.
* Uncle Inclusion Reward is awarded to the miner that **includes the uncle block in the blockchain**: 0.0625 ETH.

# Ethereum v 2.0