

# Chapter 1

## Introduction

### 1.1 Blockchain definition

Blockchain is a list of records, called *blocks*, that are securely linked together using cryptography. Each block contains a cryptographic hash of the previous block, a *timestamp*, and transaction data, generally represented as a *Merkle tree*. The timestamp proves that the transaction data existed when the block was published to get into its hash.

This structure allows for the datastructure to be immutable, and provides a linear forward history.

### 1.2 Blockchain vs Distributed Ledger Technologies (DLT)

Blockchain is a type of DLT i.e. not all DLTs are blockchain.

A DLT is a decentralized database that is managed by various participants. There is no central authority that acts as monitor. Similar to a blockchain.

The main difference between Blockchain and DLT is that a Blockchain shares its records via blocks, cryptographically protected blocks, i.e. a specific application of a DLT.

## Chapter 2

# Introduction to Bitcoin