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# Transactions

## Introduction

Transactions are the most important part of the bitcoin system. Everything else in bitcoin is designed to ensure that transactions can be created, propagated on the network, validated, and finally added to the global ledger of transactions (the blockchain). Transactions are data structures that encode the transfer of value between participants in the bitcoin system. Each transaction is a public entry in bitcoin's blockchain, the global double-entry bookkeeping ledger.

In this chapter we will examine all the various forms of transactions, what they contain, how to create them, how they are verified, and how they become part of the permanent record of all transactions. When we use the term “wallet” in this chapter, we are referring to the software that constructs transactions, not just the database of keys.

## Transactions in Detail

In Chapter 2, we looked at the transaction Alice used to pay for coffee at Bob's coffee shop using a block explorer (Figure 6-1).

The block explorer application shows a transaction from Alice's “address” to Bob's “address.” This is a much simplified view of what is contained in a transaction. In fact, as we will see in this chapter, much of the information shown is constructed by the block explorer and is not actually in the transaction.