This thesis deals with the analysis of the blockchain used for Bitcoin. Blockchain is a distributed database of all transactions made with this cryptocurrency. Its public availability represents the possibility of examining the transfer of funds between all users. However, they appear in transactions under anonymous addresses, the number of which is practically unlimited. The main goal of our work is to find a clustering of addresses corresponding to their belonging to real users. In this work, we propose new heuristics that can be used in clustering. The main benefit is a method that uses the properties of transactions created very quickly one after the other. Furthermore, we analyze the problem of the formation of a supercluster containing a disproportionately large number of addresses and propose a way in which the cluster can be appropriately partitioned.