Data storing is today very important topic. Because of Web 2.0 and software-as-a-service applications there is growing need for scalability and new types of data stores. The aim of this thesis is to help understand competing SQL and NoSQL data stores and their target use cases. Author mapped last trends in data storing and application architecture and tried to find how concrete data stores address them. There is also experimental part with benchmark and simple application that demonstrate data store‘s connectors and their speed.