In the last four years it is possible to see a significant increase in the usage of algorithmic trading. It is estimated that by the year 2010 more than 50 percent of trading on the stock markets will be performed by using algorithmic trading systems. The aim of this thesis is to create a system which can enable algorithmic trading on the stock markets. Emphasis is placed on the fast processing of data as well as the stability of the system and its modularity. Users must be able to easily modify and enhance the system according to their own individual needs (e.g. to add new algorithms or connect to another stock exchange).