In this thesis we apply agent-based modelling methodology on the software market. We derive and implement an original model of the market as the research in this field seems negligible. The work focuses mainly on the derivation of the model and explanation of the methodology. Specific features of the software market are discussed and presented as assumptions of the model. Based on these principles we construct a model of the software market with complex customer behaviour. In the end we test our model in an application we developed solely for this purpose. Responses of the model to dynamic modifications of individual parameters are tested using the application. A simple case scenario in which we apply the model on the dynamic market of game engines is presented.