Designing a software system starts with writing the system requirements. Typically, these requirements are expressed in UML and contain use cases and domain model. A use case is a sequence of tasks which have to be done to achieve one of the system's goals. These tasks are written in natural language (English). The domain model (typically captured in a class diagram) describes used objects and their relations. The goal of the thesis is to analyze, whether the system requirements are sufficient for generating an implementation model, which will manage communication between the system's components. The generated model might be used for future development and can be used for testing the users interactions. A prototype implementation of the generator is expected.