Reputation assessment is particularly needed in peer-to-peer systems because peers can have conflicting interests and their autonomy is amplified by the inherent decentralization of the environment. However, the lack of centralization makes it more difficult to perform reputation assessment. Existing reputation systems tackle the reputation assessment process in an ad-hoc manner. In this thesis, we propose a reputation assessment process and use it to classify the existing reputation systems. The process consists of three main components, namely, recommendation retrieval, recommender filtering, and recommendation evaluation. We present performance metrics for the components in the process and conduct simulation experiments to evaluate different techniques of reputation assessment in predicting the reputation of a target peer while minimizing the overhead cost.