Software cost estimation is a key concern of the software industry. However, the fact also is that today software industries are more interested in other issues like new technologies in the market, shorter development time, skill shortage etc. They are actually deviating from critical issues to routine issues. Today, people expect high quality products at very low costs and same is the goal of software engineering. Accuracy in software cost estimation has a direct impact on company’s reputation and also affects the software investment decisions. Accurate cost estimation can minimize unnecessary costs and increase productivity and efficiency of the company.

This thesis analyzes the different factors related to software cost estimation in order to identify market trends in software cost estimation. For industry related data, short survey was developed targeting small to large software organizations. This survey touched areas like cost estimation techniques, nature of projects, training in cost estimation, challenges faced by companies etc.

Apart from the survey, data has also been gathered from literature review. After identifying the problems in the current scenario, new software cost estimation techniques would be proposed. The proposed techniques would be based on two methods Wideband Delphi and COCOMO II model.

We will also evaluate the impact of quality factors on software cost estimation. The main objective of software engineering is to produce quality software product within specified time and budget, and this thesis will help meet the stated objective.

Software quality is an important aspect for every software developer and plays an important role while developing software. Today the software industry is growing with a very fast pace and clients are often concerned about the quality of the software. Past research also shows that quality management has a positive impact on organizational
cost, profit, and growth of the company. There are many software quality models available in the market which is used to describe the quality attributes of the software.

In this thesis, our base is ISO-9126 software quality model, and from this model we use three software quality metrics namely maintainability, usability, and reliability. Based on these three quality values, we will make a system which gives a single value of software quality.

This single value will then be calibrated with the software estimated cost in order to predict the software cost conforming to quality requirements.

For future scope, I would like to suggest using the proposed quality technique with existing cost estimation technique.