Chapter – 3
Objectives of Research Work

Our primary objective out here is to develop an environment for analyzing the object oriented software system for better quality assurance. Overall goals and objective of research work are as follows:

- Study the existing semiautomatic and automatic tools for software analysis in forward direction as well as tools for reengineering.
- Critically evaluate and find shortcomings from existing tools and techniques.
- Study the existing metrics for security in object oriented design.
- Study and understand the Semantic business analysis Vocabulary and Rule (SBVR) Language used in project to normalize the requirements.
- Acquire the knowledge about Natural Language processing tools and technologies.
- Convert natural Language requirements in to SBVR format.
- From SBVR format takes out the information such as noun, pronoun, verb, with the help of POS Tagger and parser.
- Generate the software artifacts and models from this information.
- It focuses on providing practical assistance to the analyst and engineer responsible for performing the analysis of existing software for potential reengineering.
- Also, it should focus on those metrics which can be used as planning metric for reengineering processes.
- Develop a system recovery tool that converts an object-oriented structural design into Information which should be reuse into another reengineering process.
- Generate Information Format for reengineering process from object-oriented source code requirement analysis using UML class diagrams.
- To enable visualize the quality of large software system by indicating possible complexity and security in them.
- Implement analysis techniques in order to automate the analysis of source code of software.
- Automation of estimation of software quality metrics from large software system is one important goal of this project.
- Study and understand the Genetic algorithm to provide different designs.
- Device fitness condition for the given problem based on requirements.
- Provide different levels of secure designs.
- Validate design by giving pictorial representation of vulnerable classes.