CHAPTER 7
CONCLUSION AND FUTURE SCOPE

The software reliability is inversely proportional to the fault detection as the no of fault detection decrease the reliability increases. The zero fault detection means the infinite reliability and the zero software reliability means the infinite faults. The proposed model suits the behavior of the software reliability so fits to the software reliability. In the beginning of testing, there is exponential number of faults in the software code. The number of faults is unknown but they are fixed in number. All faults are of same type. Each fault can be detected independent of each other. The remaining number of fault and the remaining time is useful to determine the other parameters. The probability of occurring of each fault is same. In the existing software reliability models the failure check is performed after the coding and the implementation phase. Sometimes due to faulty designs requires reimplementation of the project. It leads to wastage of the resources and the time.

The proposed software reliability model performs its working in two phases. First phase of the model is completed before the coding after the design phase. In this phase the design is checked against the requirements. This phase uses the error back propagation of the neural network. The second phase of the model is placed after the implementation phase. This model uses the mean time failure and intensity to increase the reliability. The proposed methodology is analyzed in two manners. In the first way, library software is built from the initial phase and complete methodology is applied on the software for high reliability. The software is build for the Vaish College of Engineering Rohtak Haryana. In the second way, the proposed neural network based methodology is analyzed on the datasets downloaded from internet. The dataset predicts the defects in the five modules of the NASA products. The NASA products under analysis are JM1, PC1, KM1, KC1, and KC2. The variables in this dataset are evaluated by
using static measures i.e. prediction variables. The subsets in the dataset are prepared by classifying the set on the basis of size of module. The results show the effectiveness of the technique. In future the work can be extended to use other artificial intelligence techniques.