CHAPTER 8

CONCLUSION AND FUTURE RESEARCH

8.1 CONCLUSION

Analysis of the techniques indicates the efficiency of metaheuristics compared to statistical techniques such as Mixed Integer Programming models. DPSOSA has been observed to exhibit better traits when considering both service selection and service orchestration. Due to the availability of huge number of web services to perform a particular task, it becomes mandatory to include optimization algorithms to analyze the available services and return the best or the most optimal service satisfying the user’s requirements. Further, a task is usually performed by sequencing several web services. DPSOSA algorithm provides a probabilistic service selection mechanism that has been proved to operate faster and also provides better results when compared to regular PSO.

8.2 RECOMMENDATIONS FOR FURTHER WORK

Future research directions include enhancements to selection and orchestration techniques to operate on huge data at low time intervals. Incorporation of failure handling mechanisms to provide effective availability to the user is also another area for future research. Though web service orchestrations are performed, web services tend to be software
components with high failure rates. This scheme of failure handling helps enhance operational reliability. Due to the fuzzy nature of both the requirements and the resultant services, the future contributions will also include fuzzy theory to identify services rather than numerical values. Other research directions include incorporation of techniques such as Game theory and equilibrium based techniques such as Markov’s rules.