CHAPTER 8
CONCLUSION AND FUTURE ENHANCEMENT

8.1 CONCLUSION

The concept of scheduling algorithm like FCFS, SJF and Round Robin etc., has been used with the help of metascheduler in CloudSim. It is associated with each VM, which places the newly arrived cloudlets in a queue, in case of non availability of required resources. When resources become free, only newly arrived cloudlets are served, but not the queued ones, hence jobs suffer with starvation. An enhanced metascheduler using MQS, ORF, TQS, ROP and IPMQJS policy associated with VM and get better performance than traditional algorithms.

An efficient Multi Queue Scheduling (MQS) algorithm reduces the starvation in both the reservation and on-demand plans. The proposed Optimized Resource Filling (ORF) algorithm enhanced the unfilled resource gaps, assists to reach effective resource usage and to attain the better optimum solution for cloud scheduling related problems. The proposed methodology increases the use of resources and balances the workload to prevent fragmentation when compared to traditional system.

Proposed scheduling policies that help to prevent starvation because it grants equal weight age to all the jobs based on their time of execution required. Queue based methodology helps to solve this kind of problem faced by them. The ultimate aim of job scheduling is to minimize the waiting time, reduces makespan and uses system ideally. Both the time and space complexity are the two decision making criteria that decide the effective program, based on the above mentioned criteria. The research work proposed a Tri Queue Scheduling (TQS) algorithm for cloud surrounding. Optimum resource utilization is one of the most challenging tasks in cloud computing. Effectiveness of resource sharing is decided by the metascheduler. Traditional job scheduling algorithm like FCFS, Shortest Job First, EASY and Combinational Backfill it leads to fragmentation occur due poor allocation of resources. To evade this fragmentation at the time of scheduling process it needs an efficient TQS algorithm which is vital for cloud computing.
The proposed Improved Priority based Multi Queue Job Scheduling (IPMQJS) algorithm first allocates the high priority jobs after its completion, medium priority jobs are executed and remaining low priority are entered into the job scheduler. Quality of Service has increased the resource usage and decreased the makespan i.e. finishing time of all jobs.

8.2 FUTURE ENHANCEMENT

The cost incurred in On-Demand category is very high in Cloud Environment. The proposed algorithm leads to give better results by considering the cost factor in on-demand category in future. The ROP algorithm also provides to enhance the allocation of job in Reservation category based on the anchor point. The category list is automatically shifted to on-demand category according to the availability of free space in future.