Abstract

Task scheduling problem has a special significance in multiprocessors due to efficient use of the processor and also spending less time. Tasks should be assigned to processors in such a way to minimizing makespan. In this paper, we use genetic algorithm and simulated annealing to solve task scheduling problem on multi homogenous processors with minimizing completion time. In addition we introduce another fitness function as processors idle-time balancing which should be less than a predetermined value. These algorithms are used to determine suitable priorities that lead to a sub-optimal solution. And finally to compare the performance of these algorithms, we design 9 test problem based on two fitness function.

References


Index Terms

Computer Science

Information Sciences

Keywords

Genetic algorithm, multiprocessor task scheduling, parallel processing, simulated annealing.