

## Abstract

Real-time system nowadays had evolve widely in every area. Real-time system had deadline which is the maximum limit where *task* must be done executed. To regulate the course of the process, scheduling algorithm is needed so *task* can serviced regularly. Real-time system divided into two categories, hard real-time system and soft real-time system. Scheduling on real-time system depend on deadline so the exact algorithm is needed to schedules. Scheduling algorithm type on real-time system depend on determination of priority divided into two type, static-priority scheduling and dynamic-priority scheduling.

In this final assignment, do comparative analysis on this both type of algorithm. On static-priority scheduling, used Deadline Monotonic (DM) algorithm because this algorithm is optimal, *task* with the smallest deadline is precedence. Whereas dynamic-priority scheduling used Earliest Deadline First algorithm because this algorithm is flexible, optimal, and processor utilization value can reach 100%. This comparison algorithm is done for analyzing which algorithm is better for real-time system both on response time side, processor utilization, nor overhead.

From the research that has been done, obtained results that DM algorithm has larger average waiting time value than EDF. This is make DM algorithm has larger response time value than EDF, so the system can work faster if used EDF algorithm. DM and EDF algorithms have the same value of processor utilization.

**Keywords:** real-time system, deadline monotonic, earliest deadline first