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# A COMPARATIVE ANALYSIS OF SCHEDULING ALGORITHMS

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## ABSTRACT

Time management is an important factor highly considered in any organization or system because it goes a very long way in determining productivity. In the light of this, software engineers using the scheduler have taken series of measures in designing systems that will process and complete jobs assigned to them in a predictably manageable time in order to increase the number of jobs processes per unit time. Decisions that the scheduler makes, concerning the sequence and length of time that processes may run are not easy ones, as the scheduler has only a limited amount of information about the processes that are ready to run. However, with the use of appropriate scheduling algorithms, important goals such as interactivity, effectiveness, cost and most importantly time can be balanced. In this work, three scheduling algorithms were considered, first-in-first-out (FIFO), round robin and shortest job First algorithms. A theoretical analysis that subject the algorithms to the same condition is performed through the use of exemplary job processes to determine the best among the algorithms. Job completion time, response time and permutation time were evaluated and it was discovered that shortest job first gives the optimal performance of scheduling processes followed by round robin and lastly FIFO.

**KEYWORDS:** Comparative Analysis, Scheduling, Single Tape Case, Completion Time