

Earliest Deadline Late Server

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Abstract—In real-time systems, meeting task deadlines is crucial to ensure system reliability and performance. The EDLS algorithm is thoroughly reviewed in this paper, which also looks at its implementation issues, theoretical underpinnings, and real-world applications. We discuss the key features of the EDLS algorithm, including its scheduling strategy, deadline enforcement mechanism, and methods for handling late tasks. In addition, we investigate the performance characteristics of EDLS in relation to alternative scheduling algorithms, emphasising its advantages and disadvantages under different conditions. Furthermore, we explore new developments and avenues for future study in EDLS scheduling, such as optimisation strategies, integration with upcoming technologies like autonomous systems, and applications in many fields including cloud computing and cyber-physical systems. Our goal in writing this paper is to give researchers and practitioners a thorough grasp of the EDLS algorithm and how it affects the design and development of real-time systems.

Keywords—deadline mechanism, idle time, preemptive scheduling, real time ;