

COSC 4740 Operating Systems

Written Q5

Cody Danielson

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Why is the design and Implementation of OS not “solvable”?

The design and implementation of operating systems is not “solvable” due to a variety of factors. One key reason is the diverse range of workloads, which span from embedded systems to supercomputers, each with vastly different performance and resource management requirements. Additionally, hardware is rapidly evolving, introducing new architectures and technologies that require constant adaptation in OS design. Workloads themselves are also continuously changing, and with them, the system requirements, making it impossible to create a single, optimal solution that addresses all scenarios. These factors ensure that OS design is an ongoing process rather than a fixed problem.