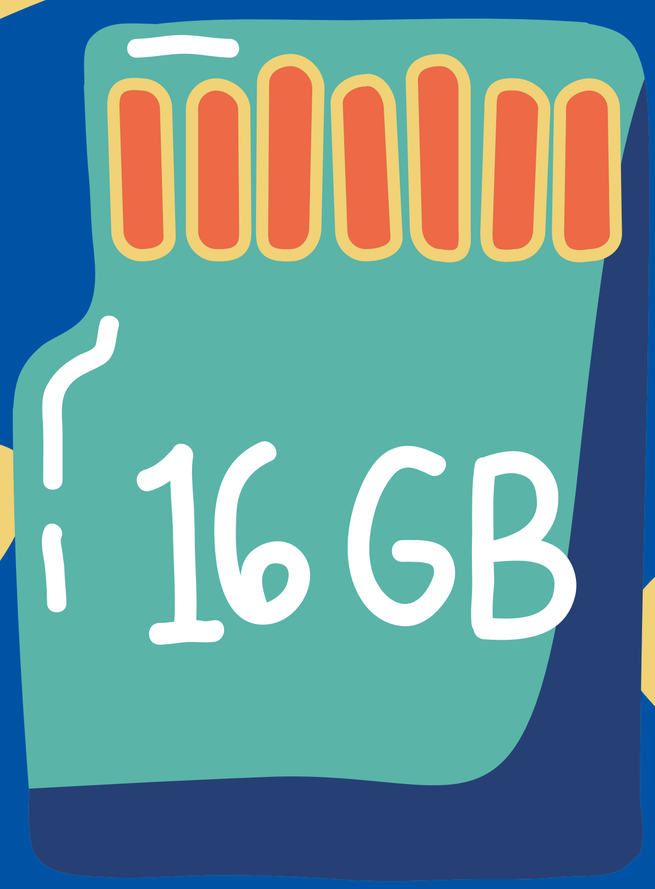
PAGE REPLACEMENT POLICY OPTIMIZATION FOR MEMORY STORAGE SYSTEM EFFICIENCY



INTRODUCTION

Operating system memory management is about how to efficiently allocate, use, and free memory for computer operations. Efficiency in memory management is important to prevent resource waste, maintain system performance, and improve responsiveness to usage. This research aims to create a simple but effective strategy for managing memory, which can improve the performance of modern computer systems and the efficiency of memory use.

DISCUSSION

Virtual storage is a method used by operating systems to manage resources and allocate space beyond what is available on the physical system. Page replacement policies are one of the most important aspects of good governance. Various memory management techniques have been developed to overcome the problem of high memory resources: paging, swapping, segmentation, virtual memory. It's important to remember that there is no universal approach when it comes to page replacement policy optimization. The determination of appropriate strategies and arrangements must be seen in the light of the attributes of the framework and the objectives to be achieved, such as expanding output, reducing unemployment, or increasing asset utilization.

CONCLUSION

This research identified several weaknesses in memory management techniques that need to be addressed. For example, segmentation can cause significant external fragmentation, while swapping incurs I/O overhead that can impact forward system performance. This shows that this research focuses on designing or analyzing strategies or algorithms to further develop the execution framework.