**INTRODUCTION**

The full potential of multiprogramming systems can be realized by interleaving the execution of more programs. Hence we use a two level memory hierarchy consisting of a faster but costlier main memory and a slower but cheaper second memory.

In virtual memory the combined size of program code, data and stack may exceed the amount of main memory available in the system. These is made possible by using secondary memory, in addition to main memory. Pages are brought into main memory only when the executing process demands them, this is known as demand paging.

A page fault typically occurs when a process references to a page that is not marked present in main memory and needs to be brought from secondary memory. In such a case an existing page needs to be discarded. The selection of such a page is performed by page replacement algorithm which try to minimize the page fault rate at the least overhead.

This report outlines the major advanced page replacement algorithms. We start with basic algorithms such as optimal page replacement, LRU and FIFO.