

# Assignment -8

## Report on Page replacement Algorithms

In an operating system that uses paging for memory management, a page replacement algorithm is needed to decide which page needs to be replaced when new page comes in.

For the given input in **pages.txt**:

3

1    2    3    2    1    5    2    1    6    2    5    6    3  
1    3    6    1    2    4    3    -1

4

1    2    3    2    1    5    2    1    6    2    5    6    3  
1    3    6    1    2    4    3    -1

5

1    2    3    2    1    5    2    1    6    2    5    6    3  
1    3    6    1    2    4    3    -1

**LRU-**

Frame size	3	4	5
Hit	9	10	14
Page Fault	11	10	6

**LFU -**

Frame size	<b>3</b>	<b>4</b>	<b>5</b>
Hit	9	11	<b>14</b>
Page Fault	11	<b>9</b>	<b>6</b>

#### **OPTIMAL -**

Frame size	<b>3</b>	<b>4</b>	<b>5</b>
Hit	11	13	<b>14</b>
Page Fault	9	<b>7</b>	<b>6</b>

In case of optimal , the page fault rate is minimum as it swaps out the page that will be use in last. As frame size increases , the page fault rate decreases.