

LAB-Problem Readme

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Implementation:

- Different page replacement algorithms were implemented from scratch using C++.
- FIFO,LRU and optimal page replacement algorithms are implemented.

How to run:

- Open Terminal
- `g++ PageReplacement.cpp;./a`

Input format:

- Enter N => no. of times algorithm to learn
- For each N->
- Enter no. of frames
- Enter reference string : Number should be space separated.

Sample input

1

3

1 2 3 1 2

Belady's Anomaly: usually increasing no. of frames reduces page faults but sometimes in FIFO page faults increase which lead to Belady's Anomaly.

Example:

```
enter reference string : 0 1 2 3 0 1 4 0 1 2 3 4
0 0 0 0 0 0 0 1 1 0 0 1
(fifo) miss are : 9
0 0 0 0 1 1 0 1 1 0 0 1
(opr) miss are : 7
0 0 0 0 0 0 0 1 1 0 0 0
(lru) miss are : 10
enter number of frames : 4
enter reference string : 0 1 2 3 0 1 4 0 1 2 3 4
0 0 0 0 1 1 0 0 0 0 0 0
(fifo) miss are : 10
0 0 0 0 1 1 0 1 1 1 0 1
(opr) miss are : 6
0 0 0 0 1 1 0 1 1 0 0 0
(lru) miss are : 8
```

As we can see, increasing frames from 3 to 4 increases ,no. of page faults in FIFO increases from 9 to 10.