

# Operating Systems - CS 4328

## Project 3

### Group Members

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### Instructions

To compile the program, perform the following command:

```
g++ main.cpp
```

To run the program, perform the following command:

```
./a.out
```

To change the number of runs, edit the following line (line 14) in `main.cpp`:

```
#define RUN_COUNT 10
```

In the above case, the program will run 10 times, each with a different frame size between 1 and 30.

### Results

The following is the redacted output of a single run of `a.out`:

```
***** TEST 1 *****
```

```
Number of page frames: 14
```

```
Page fault count:
```

```
    FIFO:           75
```

```
    LRU:            76
```

```
    OPTIMAL:        53
```

```
***** TEST 2 *****
```

```
Number of page frames: 11
```

```
Page fault count:
```

```
    FIFO:           79
```

```
    LRU:            79
```

```
    OPTIMAL:        55
```

```
***** TEST 3 *****
```

Number of page frames: 14  
Page fault count:  
FIFO: 74  
LRU: 71  
OPTIMAL: 49

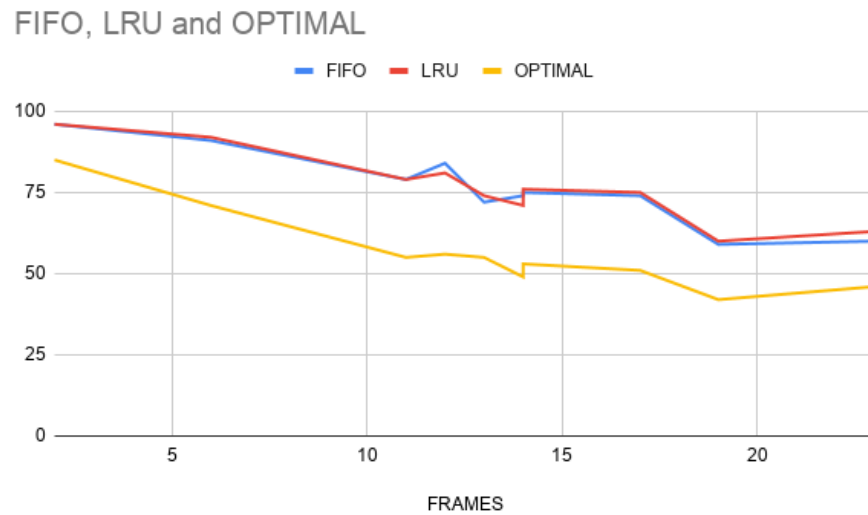
\*\*\*\*\* TEST 4 \*\*\*\*\*

Number of page frames: 13  
Page fault count:  
FIFO: 72  
LRU: 74  
OPTIMAL: 55

\*\*\*\*\* TEST 5 \*\*\*\*\*

Number of page frames: 19  
Page fault count:  
FIFO: 59  
LRU: 60  
OPTIMAL: 42

The following chart reflects the results of the aforementioned run:



The y-axis reflects the number of faults whereas the x-axis pertains to the frame size.