

Final Project – Test Document 1

This document contains screenshots of the execution of the 4 algorithms using inputs from HW6 which are: $N = 4$ and the following reference string: 2 4 5 6 1 5 3 4 5 2 3 6 5 3 4 7 3 5 6

FIFO

Beginning

```
-----  
FRAME COUNT = 4  
-----  
  
0 - Exit  
1 - Read reference string  
2 - Generate reference string  
3 - Display current reference string  
4 - Simulate FIFO  
5 - Simulate OPT  
6 - Simulate LRU  
7 - Simulate LFU  
Select option: 1  
Enter reference string:  
2 4 5 6 1 5 3 4 5 2 3 6 5 3 4 7 3 5 6  
  
0 - Exit  
1 - Read reference string  
2 - Generate reference string  
3 - Display current reference string  
4 - Simulate FIFO  
5 - Simulate OPT  
6 - Simulate LRU  
7 - Simulate LFU  
Select option: 4  
-----  
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |  
Physical frame 0 || 2 |  
Physical frame 1 || |  
Physical frame 2 || |  
Physical frame 3 || |  
Page faults      || F |  
Victim frames    || |  
-----  
  
Press ENTER to continue.  
|
```

Middle

```
Press ENTER to continue.

- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 4 | 5 | 6 | 1 | 1 | 3 | 4 |
Physical frame 1 ||   | 2 | 4 | 5 | 6 | 6 | 1 | 3 |
Physical frame 2 ||   |   | 2 | 4 | 5 | 5 | 6 | 1 |
Physical frame 3 ||   |   |   | 2 | 4 | 4 | 5 | 6 |
Page faults      || F | F | F | F | F |   | F | F |
Victim frames    ||   |   |   |   | 2 |   | 4 | 5 |
- - - - -

Press ENTER to continue.

- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 4 | 5 | 6 | 1 | 1 | 3 | 4 | 5 |
Physical frame 1 ||   | 2 | 4 | 5 | 6 | 6 | 1 | 3 | 4 |
Physical frame 2 ||   |   | 2 | 4 | 5 | 5 | 6 | 1 | 3 |
Physical frame 3 ||   |   |   | 2 | 4 | 4 | 5 | 6 | 1 |
Page faults      || F | F | F | F | F |   | F | F | F |
Victim frames    ||   |   |   |   | 2 |   | 4 | 5 | 6 |
- - - - -

Press ENTER to continue.
```

End

```
Press ENTER to continue.

- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 4 | 5 | 6 | 1 | 1 | 3 | 4 | 5 | 2 | 2 | 6 | 6 | 3 | 4 | 7 | 7 | 5 | 6 |
Physical frame 1 ||   | 2 | 4 | 5 | 6 | 6 | 1 | 3 | 4 | 5 | 5 | 2 | 2 | 6 | 3 | 4 | 4 | 7 | 5 |
Physical frame 2 ||   |   | 2 | 4 | 5 | 5 | 6 | 1 | 3 | 4 | 4 | 5 | 5 | 2 | 6 | 3 | 3 | 4 | 7 |
Physical frame 3 ||   |   |   | 2 | 4 | 4 | 5 | 6 | 1 | 3 | 3 | 4 | 4 | 5 | 2 | 6 | 6 | 3 | 4 |
Page faults      || F | F | F | F | F |   | F | F | F | F |   | F |   | F | F | F |   | F | F |
Victim frames    ||   |   |   |   | 2 |   | 4 | 5 | 6 | 1 |   | 3 |   | 4 | 5 | 2 |   | 6 | 3 |
- - - - -

Press ENTER to continue.

Total page faults: 15
- - - - -
- - - - -

0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option:
```

OPT

Beginning

```

0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option: 5
-----
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 |
Physical frame 1 ||
Physical frame 2 ||
Physical frame 3 ||
Page faults      || F |
Victim frames    ||
-----
Press ENTER to continue.

```

Middle

```

Press ENTER to continue.
-----
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
Physical frame 1 || 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
Physical frame 2 || 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 || 6 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
Page faults      || F | F | F | F | F | F | F |
Victim frames    || 6 | 1 |
-----
Press ENTER to continue.
-----
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 |
Physical frame 1 || 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
Physical frame 2 || 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 || 6 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 |
Page faults      || F | F | F | F | F | F | F | F |
Victim frames    || 6 | 1 | 2 |
-----
Press ENTER to continue.

```

End

```
Press ENTER to continue.

- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 7 | 7 | 7 | 7 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
Page faults      || F | F | F | F | F |   | F |   |   |   |   | F |   |   |   | F |   |   |
Victim frames    ||   |   |   |   | 6 |   | 1 |   |   |   |   | 2 |   |   |   | 4 |   |   |
- - - - -

Press ENTER to continue.

Total page faults: 8
- - - - -
- - - - -

0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option:
```

LRU

Beginning

```
0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option: 6
- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 |
Physical frame 1 ||
Physical frame 2 ||
Physical frame 3 ||
Page faults      || F |
Victim frames    ||
- - - - -

Press ENTER to continue.
```

Middle

```
Press ENTER to continue.
- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 3 | 3 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 6 | 6 | 6 | 4 |
Page faults      || F | F | F | F | F |   | F | F |
Victim frames    ||   |   |   |   | 2 |   | 4 | 6 |
- - - - -

Press ENTER to continue.
- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 6 | 6 | 6 | 4 | 4 |
Page faults      || F | F | F | F | F |   | F | F |
Victim frames    ||   |   |   |   | 2 |   | 4 | 6 |
- - - - -

Press ENTER to continue.
```

End

```
Press ENTER to continue.

- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 | 6 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 |
Page faults      || F | F | F | F | F |   | F | F |   | F |   | F |   | F | F |   | F |
Victim frames    ||   |   |   |   | 2 |   | 4 | 6 |   | 1 |   | 4 |   |   | 2 | 6 |   | 4 |
- - - - -

Press ENTER to continue.

Total page faults: 12
- - - - -
- - - - -

0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option:
```


LFU

Beginning

```
0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option: 7
- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 |
Physical frame 1 ||
Physical frame 2 ||
Physical frame 3 ||
Page faults      || F |
Victim frames    ||
- - - - -

Press ENTER to continue.
```

Middle

```
Press ENTER to continue.
- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 3 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 6 | 6 | 6 | 6 | 6 |
Page faults      || F | F | F | F | F |   | F |   |
Victim frames    ||   |   |   | 2 |   | 1 |   |   |
- - - - -

Press ENTER to continue.
- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 3 | 2 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
Page faults      || F | F | F | F | F |   | F |   | F |
Victim frames    ||   |   |   | 2 |   | 1 |   | 3 |
- - - - -

Press ENTER to continue.
```

End

```
Press ENTER to continue.

- - - - -
Reference string || 2 | 4 | 5 | 6 | 1 | 5 | 3 | 4 | 5 | 2 | 3 | 6 | 5 | 3 | 4 | 7 | 3 | 5 | 6 |
Physical frame 0 || 2 | 2 | 2 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 2 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 6 |
Physical frame 1 ||   | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
Physical frame 2 ||   |   | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
Physical frame 3 ||   |   |   | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
Page faults      || F | F | F | F | F |   | F |   |   | F | F | F |   |   |   | F |   | F |
Victim frames    ||   |   |   |   | 2 |   | 1 |   |   | 3 | 6 | 2 |   |   |   | 6 |   | 7 |
- - - - -

Press ENTER to continue.

Total page faults: 11
- - - - -
- - - - -

0 - Exit
1 - Read reference string
2 - Generate reference string
3 - Display current reference string
4 - Simulate FIFO
5 - Simulate OPT
6 - Simulate LRU
7 - Simulate LFU
Select option:
```