CS 481

Homework 6

Baker, Alex

# 9.22

## Part A

m = 16

n = 12

|  |  |  |
| --- | --- | --- |
| Page | Page Frame | Reference Bit |
| 0 | 9 | 0 |
| 1 | 1 | 0 |
| 2 | 14 | 0 |
| 3 | 10 | 1 |
| 4 | - | 0 |
| 5 | 13 | 0 |
| 6 | 8 | 0 |
| 7 | 15 | 1 |
| 8 | - | 0 |
| 9 | 0 | 0 |
| 10 | 5 | 1 |
| 11 | 4 | 0 |
| 12 | - | 0 |
| 13 | - | 0 |
| 14 | 3 | 1 |
| 15 | 2 | 0 |

* 0xE12C = 3\*10 + 12c = 0x015c
* 0x3A9D = a\*10 + A9D = 0x0B3D
* 0xA9D9 = 5\*10 + 9D9 = 0x0A29
* 0x7001 = f\*10 + 1 = 0x00F1
* 0xACA1 = 5\*10 + CA1 = 0x0CF1

## Part B

0x4FFF

## Part C

6, 7, 11, 12

# 9.21

## LRU

7 – M

7 2 – M

7 2 3 – M

2 3 1 – M

3 1 2 – H

1 2 5 – M

2 5 3 – M

5 3 4 – M

3 4 6 – M

4 6 7 – M

4 6 7 – H

6 7 1 – M

7 1 0 – M

1 0 5 – M

0 5 4 – M

5 4 6 – M

4 6 2 – M

6 2 3 – M

2 3 0 – M

3 0 1 – M

18 Misses

## FIFO

7 – M

7 2 – M

7 2 3 – M

2 3 1 – M

2 3 1 – H

3 1 5 – M

3 1 5 – H

1 5 4 – M

5 4 6 – M

4 6 7 – M

4 6 7 – H

6 7 1 – M

7 1 0 – M

1 0 5 – M

0 5 4 – M

5 4 6 – M

4 6 2 – M

6 2 3 – M

2 3 0 – M

3 0 1 – M

17 Misses

## Optimal

7 – M

7 2 – M

7 2 3 – M

1 2 3 – M

1 2 3 – H

1 5 3 – M

1 5 3 – H

1 5 4 – M

1 5 6 – M

1 5 7 – M

1 5 7 – H

1 5 7 – H

1 5 0 – M

1 5 0 – H

1 4 0 – M

1 6 0 – M

1 2 0 – M

1 3 0 – M

1 3 0 – H

1 3 0 – H

13 Misses