

```
~/Desktop/OS-Assignment/Page-Rep/demand (0.072s)
```

```
gcc demand.c
```

```
~/Desktop/OS-Assignment/Page-Rep/demand (0.023s)
```

```
./a.out
```

```
Page Reference String: 1 2 3 2 1 5 2 1 6 2 5 6 3 1 3  
Demand Paging Simulation  
-----
```

```
Requesting Page 1: Page Fault!  
Frames: [1] [ ] [ ]
```

```
Requesting Page 2: Page Fault!  
Frames: [1] [2] [ ]
```

```
Requesting Page 3: Page Fault!  
Frames: [1] [2] [3]
```

```
Requesting Page 2: Page Hit!  
Frames: [1] [2] [3]
```

```
Requesting Page 1: Page Hit!  
Frames: [1] [2] [3]
```

```
Requesting Page 5: Page Fault!  
Frames: [5] [2] [3]
```

```
Requesting Page 2: Page Hit!  
Frames: [5] [2] [3]
```

```
Requesting Page 1: Page Fault!  
Frames: [5] [1] [3]
```

Requesting Page 6: Page Fault!  
Frames: [5] [1] [6]

Requesting Page 2: Page Fault!  
Frames: [2] [1] [6]

Requesting Page 5: Page Fault!  
Frames: [2] [5] [6]

Requesting Page 6: Page Hit!  
Frames: [2] [5] [6]

Requesting Page 3: Page Fault!  
Frames: [2] [5] [3]

Requesting Page 1: Page Fault!  
Frames: [1] [5] [3]

Requesting Page 3: Page Hit!  
Frames: [1] [5] [3]

Total Page Faults: 10  
Page Fault Rate: 66.67%

```
~/Desktop/OS-Assignment/Page-Rep/Fifo (0.073s)
```

```
gcc fifo.c
```

```
~/Desktop/OS-Assignment/Page-Rep/Fifo (0.02s)
```

```
./a.out
```

```
Page Reference String: 1 2 3 4 1 2 5 1 2 3 4 5
```

```
Number of frames: 3
```

```
FIFO Page Replacement Simulation:
```

```
-----
```

```
Referencing page 1: Page Fault! Frames: [1] [ ] [ ]
```

```
Referencing page 2: Page Fault! Frames: [1] [2] [ ]
```

```
Referencing page 3: Page Fault! Frames: [1] [2] [3]
```

```
Referencing page 4: Page Fault! Frames: [4] [2] [3]
```

```
Referencing page 1: Page Fault! Frames: [4] [1] [3]
```

```
Referencing page 2: Page Fault! Frames: [4] [1] [2]
```

```
Referencing page 5: Page Fault! Frames: [5] [1] [2]
```

```
Referencing page 1: Page Hit! Frames: [5] [1] [2]
```

```
Referencing page 2: Page Hit! Frames: [5] [1] [2]
```

```
Referencing page 3: Page Fault! Frames: [5] [3] [2]
```

```
Referencing page 4: Page Fault! Frames: [5] [3] [4]
```

```
Referencing page 5: Page Hit! Frames: [5] [3] [4]
```

```
Total page faults: 9
```

```
Page fault rate: 75.00%
```

```
~/Desktop/OS-Assignment/Page-Rep/lru (0.069s)
```

```
gcc lru.c
```

```
~/Desktop/OS-Assignment/Page-Rep/lru (0.025s)
```

```
./a.out
```

```
Page Reference String: 1 2 3 4 1 2 5 1 2 3 4 5
```

```
Number of frames: 3
```

```
LRU Page Replacement Simulation:
```

```
-----
```

```
Referencing page 1: Page Fault! Frames: [1] [ ] [ ]
```

```
Referencing page 2: Page Fault! Frames: [1] [2] [ ]
```

```
Referencing page 3: Page Fault! Frames: [1] [2] [3]
```

```
Referencing page 4: Page Fault! Frames: [4] [2] [3]
```

```
Referencing page 1: Page Fault! Frames: [4] [1] [3]
```

```
Referencing page 2: Page Fault! Frames: [4] [1] [2]
```

```
Referencing page 5: Page Fault! Frames: [5] [1] [2]
```

```
Referencing page 1: Page Hit! Frames: [5] [1] [2]
```

```
Referencing page 2: Page Hit! Frames: [5] [1] [2]
```

```
Referencing page 3: Page Fault! Frames: [3] [1] [2]
```

```
Referencing page 4: Page Fault! Frames: [3] [4] [2]
```

```
Referencing page 5: Page Fault! Frames: [3] [4] [5]
```

```
Total page faults: 10
```

```
Page fault rate: 83.33%
```

```
~/Desktop/OS-Assignment/Page-Rep/optimal (0.075s)
```

```
gcc optimal.c
```

```
~/Desktop/OS-Assignment/Page-Rep/optimal (0.024s)
```

```
./a.out
```

```
Page Reference String: 1 2 3 4 1 2 5 1 2 3 4 5
```

```
Number of frames: 3
```

```
Optimal (Belady's) Page Replacement Simulation:
```

```
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```

```
Referencing page 1: Page Fault! Frames: [1] [ ] [ ]
```

```
Referencing page 2: Page Fault! Frames: [1] [2] [ ]
```

```
Referencing page 3: Page Fault! Frames: [1] [2] [3]
```

```
Referencing page 4: Page Fault! Frames: [1] [2] [4]
```

```
Referencing page 1: Page Hit! Frames: [1] [2] [4]
```

```
Referencing page 2: Page Hit! Frames: [1] [2] [4]
```

```
Referencing page 5: Page Fault! Frames: [1] [2] [5]
```

```
Referencing page 1: Page Hit! Frames: [1] [2] [5]
```

```
Referencing page 2: Page Hit! Frames: [1] [2] [5]
```

```
Referencing page 3: Page Fault! Frames: [3] [2] [5]
```

```
Referencing page 4: Page Fault! Frames: [4] [2] [5]
```

```
Referencing page 5: Page Hit! Frames: [4] [2] [5]
```

```
Total page faults: 7
```

```
Page fault rate: 58.33%
```