```
~/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:
-----------------------------------------

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%
```