```
anupam@anupam:~$ cc fifo.c -o a
anupam@anupam:~$ ./a
Enter the size of frames allocated for a process : 3
Enter the page numbers required by the process (enter -1 to stop)
7 0 1 2 0 3 0 4 2 3 0 3 2 1 2 0 1 7 0 1 -1
Enter the corrosponding modify status for each page
0 1 0 0 1 1 0 0 0 0 0 0 1 0 0 0 1 0 0 0
Enter the page numbers which are already in memory (enter -1 to stop):
-1
Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
1
-----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

No page fault
```

Next page number required = 3

Current page numbers in memory 2 0 1

Page fault

Next page number required = 0

Current page numbers in memory 2 3 1

Page fault

Next page number required = 4

Current page numbers in memory 2 3 0

Page fault

Next page number required = 2

Current page numbers in memory 4 3 0

Page fault

Next page number required = 3

Current page numbers in memory 4 2 0

Page fault

Next page number required = 0

Current page numbers in memory 4 2 3

Page fault

```
Next page number required = 3
Current page numbers in memory            0     2     3
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 2
Current page numbers in memory            0     2     3
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 1
Current page numbers in memory            0     2     3
Page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 2
Current page numbers in memory            0     1     3
Page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 0
Current page numbers in memory            0     1     2
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 1
Current page numbers in memory            0     1     2
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 7
Current page numbers in memory            0     1     2
Page fault
```

```
---------------------------------------------------------------

---------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     1     2

Page fault


---------------------------------------------------------------

---------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     2

Page fault


---------------------------------------------------------------

No more pages required

Current page numbers in memory            7     0     1

Total pagefaults = 15


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
2
---------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1

Page fault


---------------------------------------------------------------

---------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Page fault


---------------------------------------------------------------

---------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1
```

```
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            2     0     1

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     3

No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 4

Current page numbers in memory            2     0     3

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            2     4     3

No page fault

----------------------------------------------------------------

----------------------------------------------------------------
```

```
Next page number required = 3
Current page numbers in memory            2     4     3
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 0
Current page numbers in memory            2     4     3
Page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 3
Current page numbers in memory            2     0     3
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 2
Current page numbers in memory            2     0     3
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 1
Current page numbers in memory            2     0     3
Page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 2
Current page numbers in memory            2     0     1
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 0
Current page numbers in memory            2     0     1
No page fault
```

```
----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            2     0     1

No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            2     0     1

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     0     1

No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     1

No page fault


----------------------------------------------------------------

No more pages required

Current page numbers in memory            7     0     1

Total pagefaults = 9


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
3
----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1
```

```
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            2     0     1

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     3

No page fault

----------------------------------------------------------------
```

Next page number required = 4

Current page numbers in memory 2 0 3

Page fault

Next page number required = 2

Current page numbers in memory 4 0 3

Page fault

Next page number required = 3

Current page numbers in memory 4 0 2

Page fault

Next page number required = 0

Current page numbers in memory 4 3 2

Page fault

Next page number required = 3

Current page numbers in memory 0 3 2

No page fault

Next page number required = 2

Current page numbers in memory 0 3 2

No page fault

Next page number required = 1

Current page numbers in memory 0 3 2

```
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            1     3     2

No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            1     3     2

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            1     0     2

No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            1     0     2

Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            1     0     7

No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            1     0     7

No page fault

----------------------------------------------------------------

No more pages required
```

```
Current page numbers in memory            1     0     7

Total pagefaults = 12


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
4
----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1

Count for each page used

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Count for each page used
(7, 1)
Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1

Count for each page used
(7, 1)      (0, 1)
Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Count for each page used
(7, 1)      (0, 1)      (1, 1)
Page fault


----------------------------------------------------------------


least used times array is(indices in frames) :  0     1     2
```

```
-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

Count for each page used
(7, 1)      (0, 1)      (1, 1)      (2, 1)
No page fault     0


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            2     0     1

Count for each page used
(7, 1)      (0, 2)      (1, 1)      (2, 1)
Page fault


-----------------------------------------------------------------


least used times array is(indices in frames) :  0     2


-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     3

Count for each page used
(7, 1)      (0, 2)      (1, 1)      (2, 1)      (3, 1)
No page fault     0


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 4

Current page numbers in memory            2     0     3

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 1)      (3, 1)
Page fault


-----------------------------------------------------------------


least used times array is(indices in frames) :  0     2


-----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            4     0     3

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 1)      (3, 1)      (4, 1)
Page fault
```

```
----------------------------------------------------------------


least used times array is(indices in frames) :  0     2


----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            4     0     2

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 2)      (3, 1)      (4, 1)
Page fault


----------------------------------------------------------------


least used times array is(indices in frames) :  0


----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            3     0     2

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 2)      (3, 2)      (4, 1)
No page fault     0


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            3     0     2

Count for each page used
(7, 1)      (0, 4)      (1, 1)      (2, 2)      (3, 2)      (4, 1)
No page fault     3


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            3     0     2

Count for each page used
(7, 1)      (0, 4)      (1, 1)      (2, 2)      (3, 3)      (4, 1)
No page fault     2


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            3     0     2

Count for each page used
(7, 1)      (0, 4)      (1, 1)      (2, 3)      (3, 3)      (4, 1)
Page fault
```

```
----------------------------------------------------------------


least used times array is(indices in frames) :  0     2


----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            3     0     1

Count for each page used
(7, 1)      (0, 4)      (1, 2)      (2, 3)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


least used times array is(indices in frames) :  2


----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            3     0     2

Count for each page used
(7, 1)      (0, 4)      (1, 2)      (2, 4)      (3, 3)      (4, 1)
No page fault     0


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            3     0     2

Count for each page used
(7, 1)      (0, 5)      (1, 2)      (2, 4)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


least used times array is(indices in frames) :  0


----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            1     0     2

Count for each page used
(7, 1)      (0, 5)      (1, 3)      (2, 4)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


least used times array is(indices in frames) :  0
```

```
-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     0     2

Count for each page used
(7, 2)      (0, 5)      (1, 3)      (2, 4)      (3, 3)      (4, 1)
No page fault     0


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     2

Count for each page used
(7, 2)      (0, 6)      (1, 3)      (2, 4)      (3, 3)      (4, 1)
Page fault


-----------------------------------------------------------------


least used times array is(indices in frames) :  0


No more pages required

Current page numbers in memory            1     0     2

Total pagefaults = 13


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
5
-----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1

Count for each page used

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Count for each page used
(7, 1)
Page fault
```

```
----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1

Count for each page used
(7, 1)      (0, 1)
Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Count for each page used
(7, 1)      (0, 1)      (1, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0      1     2


----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

Count for each page used
(7, 1)      (0, 1)      (1, 1)      (2, 1)
No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            2     0     1

Count for each page used
(7, 1)      (0, 2)      (1, 1)      (2, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  1


----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     3     1

Count for each page used
(7, 1)      (0, 2)      (1, 1)      (2, 1)      (3, 1)
Page fault
```

```
-----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0      1     2


-----------------------------------------------------------------

Next page number required = 4

Current page numbers in memory            2     3     0

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 1)      (3, 1)
Page fault


-----------------------------------------------------------------


MAX used times array is(indices in frames)  :  2


-----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            2     3     4

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 1)      (3, 1)      (4, 1)
No page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 3

Current page numbers in memory            2     3     4

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 2)      (3, 1)      (4, 1)
No page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     3     4

Count for each page used
(7, 1)      (0, 3)      (1, 1)      (2, 2)      (3, 2)      (4, 1)
Page fault


-----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0      1


-----------------------------------------------------------------

Next page number required = 3
```

```
Current page numbers in memory            0     3     4

Count for each page used
(7, 1)      (0, 4)      (1, 1)      (2, 2)      (3, 2)      (4, 1)
No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            0     3     4

Count for each page used
(7, 1)      (0, 4)      (1, 1)      (2, 2)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0


----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            2     3     4

Count for each page used
(7, 1)      (0, 4)      (1, 1)      (2, 3)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0      1


----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            2     1     4

Count for each page used
(7, 1)      (0, 4)      (1, 2)      (2, 3)      (3, 3)      (4, 1)
No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     1     4

Count for each page used
(7, 1)      (0, 4)      (1, 2)      (2, 4)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0
```

```
----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            0     1     4

Count for each page used
(7, 1)      (0, 5)      (1, 2)      (2, 4)      (3, 3)      (4, 1)
No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            0     1     4

Count for each page used
(7, 1)      (0, 5)      (1, 3)      (2, 4)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  0


----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     1     4

Count for each page used
(7, 2)      (0, 5)      (1, 3)      (2, 4)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  1


----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     4

Count for each page used
(7, 2)      (0, 6)      (1, 3)      (2, 4)      (3, 3)      (4, 1)
Page fault


----------------------------------------------------------------


MAX used times array is(indices in frames)  :  1


No more pages required

Current page numbers in memory            7     1     4

Total pagefaults = 14
```

```
Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
6
----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1

Use status                                0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Use status                                0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1

Use status                                0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Use status                                0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

Use status                                0     0     0
```

No page fault

Next page number required = 3

Current page numbers in memory 2 0 1

Use status 0 1 0

Page fault

Next page number required = 0

Current page numbers in memory 2 0 3

Use status 0 0 0

No page fault

Next page number required = 4

Current page numbers in memory 2 0 3

Use status 0 1 0

Page fault

Next page number required = 2

Current page numbers in memory 4 0 3

Use status 0 1 0

Page fault

Next page number required = 3

Current page numbers in memory 4 0 2

Use status 0 0 0

Page fault

```
Next page number required = 0
Current page numbers in memory            3     0     2
Use status                                0     0     0
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 3
Current page numbers in memory            3     0     2
Use status                                0     1     0
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 2
Current page numbers in memory            3     0     2
Use status                                1     1     0
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 1
Current page numbers in memory            3     0     2
Use status                                1     1     1
Page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 2
Current page numbers in memory            3     1     2
Use status                                0     0     0
No page fault

-----------------------------------------------------------------
-----------------------------------------------------------------
Next page number required = 0
Current page numbers in memory            3     1     2
Use status                                0     0     1
Page fault
```

```
-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            0     1     2

Use status                                0     0     0

No page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            0     1     2

Use status                                0     1     0

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            0     1     7

Use status                                0     0     0

No page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            0     1     7

Use status                                1     0     0

No page fault


-----------------------------------------------------------------

No more pages required

Current page numbers in memory            0     1     7

Use status                                1     1     0

Total pagefaults = 11


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
```

```
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
7
-----------------------------------------------------------------

Next page number required = 7

Current page numbers in memory            -1    -1    -1

Use status                                0     0     0

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            7     -1    -1

Use status                                0     0     0

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            7     0     -1

Use status                                0     0     0

Page fault


-----------------------------------------------------------------

-----------------------------------------------------------------

Next page number required = 2

Current page numbers in memory            7     0     1

Use status                                0     0     0

Page fault


-----------------------------------------------------------------



-----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            2     0     1

Use status                                0     0     0

No page fault


-----------------------------------------------------------------
```

Next page number required = 3

Current page numbers in memory 2 0 1

Use status 0 1 0

Page fault

Next page number required = 0

Current page numbers in memory 2 0 3

Use status 0 0 0

No page fault

Next page number required = 4

Current page numbers in memory 2 0 3

Use status 0 1 0

Page fault

Next page number required = 2

Current page numbers in memory 4 0 3

Use status 0 0 0

Page fault

Next page number required = 3

Current page numbers in memory 4 2 3

Use status 0 0 0

No page fault

Next page number required = 0

Current page numbers in memory 4 2 3

Use status 0 0 1

Page fault

Next page number required = 3

Current page numbers in memory 0 2 3

Use status 0 0 0

No page fault

Next page number required = 2

Current page numbers in memory 0 2 3

Use status 0 0 1

No page fault

Next page number required = 1

Current page numbers in memory 0 2 3

Use status 0 1 1

Page fault

Next page number required = 2

Current page numbers in memory 1 2 3

Use status 0 0 0

No page fault

Next page number required = 0

Current page numbers in memory 1 2 3

Use status 0 1 0

Page fault

Next page number required = 1

Current page numbers in memory 1 2 0

Use status 0 1 0

No page fault

Next page number required = 7

Current page numbers in memory 1 2 0

Use status 1 1 0

Page fault

Next page number required = 0

Current page numbers in memory 1 2 7

Use status 0 0 0

Page fault

Next page number required = 1

```
Current page numbers in memory            1     0     7

Use status                                0     0     0

No page fault


----------------------------------------------------------------

No more pages required

Current page numbers in memory            1     0     7

Use status                                1     0     0

Total pagefaults = 12


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.           Second method
8.           Third method
9.Enhanced Second chance
10.Stop
8
----------------------------------------------------------------

Next page number required

Current page numbers in memory            -1    -1    -1

Use status                                0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required

Current page numbers in memory            7     -1    -1

Use status                                1     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required

Current page numbers in memory            7     0     -1

Use status                                1     1     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2
```

```
Current page numbers in memory            7     0     1
Use status                                1     1     1
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0
Current page numbers in memory            2     0     1
Use status                                1     0     0
No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 3
Current page numbers in memory            2     0     1
Use status                                1     1     0
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0
Current page numbers in memory            2     0     3
Use status                                1     0     1
No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 4
Current page numbers in memory            2     0     3
Use status                                1     1     1
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2
Current page numbers in memory            4     0     3
Use status                                1     0     0
Page fault
```

Next page number required = 3

Current page numbers in memory 4 2 3

Use status 1 1 0

No page fault

Next page number required = 0

Current page numbers in memory 4 2 3

Use status 1 1 1

Page fault

Next page number required = 3

Current page numbers in memory 4 2 0

Use status 0 0 1

Page fault

Next page number required = 2

Current page numbers in memory 3 2 0

Use status 1 0 1

No page fault

Next page number required = 1

Current page numbers in memory 3 2 0

Use status 1 1 1

Page fault

Next page number required = 2

```
Current page numbers in memory            3     1     0
Use status                                0     1     0
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0
Current page numbers in memory            3     1     2
Use status                                0     1     1
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1
Current page numbers in memory            0     1     2
Use status                                1     1     1
No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 7
Current page numbers in memory            0     1     2
Use status                                1     1     1
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0
Current page numbers in memory            0     7     2
Use status                                0     1     0
No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1
Current page numbers in memory            0     7     2
Use status                                1     1     0
Page fault
```

```
----------------------------------------------------------------

No more pages required

Current page numbers in memory            0     7     1

Use status                                1     1     1

Total pagefaults = 14


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.           Second method
8.           Third method
9.Enhanced Second chance
10.Stop
9
----------------------------------------------------------------

Next page number required

Current page numbers in memory            -1    -1    -1

Use status                                0     0     0

Modify status                             0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required

Current page numbers in memory            7     -1    -1

Use status                                1     0     0

Modify status                             0     0     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required

Current page numbers in memory            7     0     -1

Use status                                1     1     0

Modify status                             0     1     0

Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 2
```

```
Current page numbers in memory            7     0     1
Use status                                1     1     1
Modify status                             0     1     0
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0
Current page numbers in memory            2     0     1
Use status                                1     0     0
Modify status                             0     1     0
No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 3
Current page numbers in memory            2     0     1
Use status                                1     1     0
Modify status                             0     1     0
Page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0
Current page numbers in memory            2     0     3
Use status                                1     1     1
Modify status                             0     1     1
No page fault

----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 4
Current page numbers in memory            2     0     3
Use status                                1     1     1
Modify status                             0     0     1
Page fault

----------------------------------------------------------------

----------------------------------------------------------------
```

Next page number required = 2

Current page numbers in memory	4	0	3
Use status	1	0	0
Modify status	0	0	1

Page fault

Next page number required = 3

Current page numbers in memory	4	2	3
Use status	1	1	0
Modify status	0	0	1

No page fault

Next page number required = 0

Current page numbers in memory	4	2	3
Use status	1	1	1
Modify status	0	0	0

Page fault

Next page number required = 3

Current page numbers in memory	4	2	0
Use status	0	0	1
Modify status	0	0	0

Page fault

Next page number required = 2

Current page numbers in memory	3	2	0
Use status	1	0	1
Modify status	0	0	0

No page fault

Next page number required = 1

Current page numbers in memory	3	2	0
Use status	1	1	1
Modify status	0	1	0

Page fault

Next page number required = 2

Current page numbers in memory	3	2	1
Use status	0	0	1
Modify status	0	1	0

No page fault

Next page number required = 0

Current page numbers in memory	3	2	1
Use status	0	1	1
Modify status	0	0	0

Page fault

Next page number required = 1

Current page numbers in memory	0	2	1
Use status	1	1	1
Modify status	0	0	0

No page fault

Next page number required = 7

Current page numbers in memory	0	2	1
Use status	1	1	1
Modify status	0	0	1

```
Page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 0

Current page numbers in memory            0     7     1

Use status                                0     1     0

Modify status                             0     0     1

No page fault


----------------------------------------------------------------

----------------------------------------------------------------

Next page number required = 1

Current page numbers in memory            0     7     1

Use status                                1     1     0

Modify status                             0     0     1

No page fault


----------------------------------------------------------------

No more pages required

Current page numbers in memory            0     7     1

Use status                                1     1     1

Modify status                             0     0     0

Total pagefaults = 12


Enter the page replacement algorithm to be used.
1.FIFO
2.Optimal
3.LRU
4.LFU
5.MFU
6.Second chance: First method
7.          Second method
8.          Third method
9.Enhanced Second chance
10.Stop
10
Summary : Total page faults for
FIFO                    :      15

Optimal                 :      9

LRU                     :      12

LFU                     :      13

MFU                     :      14

Second chance: first    :      11

Second chance: first    :      12
```

```
Second chance: third   :      14

Enhanced second chance :      12

anupam@anupam:~$
```