

(globals)

Project C

prodconos.c

fifoos.c

lruos.c

optimalos.c

seqfilallocos.c

```
1 #include<stdio.h>
2 int findLRU(int time[], int n){
3     int i, minimum = time[0], pos = 0;
4     for(i = 1; i < n; ++i){
5         if(time[i] < minimum){
6             minimum = time[i];
7             pos = i;
8         }
9     }
10    return pos;
11 }
12 int main()
13 {
14     int no_of_frames, no_of_pages, frames[10], pages[30], counter = 0, time[10], flag1, flag2, i, j, pos, faults = 0;
15     printf("Enter number of frames: ");
16     scanf("%d", &no_of_frames);
17     printf("Enter number of pages: ");
18     scanf("%d", &no_of_pages);
19     printf("Enter reference string: ");
20     for(i = 0; i < no_of_pages; ++i){
21         scanf("%d", &pages[i]);
22     }
23     for(i = 0; i < no_of_frames; ++i){
24         frames[i] = -1;
25     }
26     for(i = 0; i < no_of_pages; ++i){
27         flag1 = flag2 = 0;
28         for(j = 0; j < no_of_frames; ++j){
29             if(frames[j] == pages[i]){
30                 counter++;
31                 time[j] = counter;
32                 flag1 = flag2 = 1;
```

```
33     break;
34 }
35 }
36 if(flag1 == 0){
37 for(j = 0; j < no_of_frames; ++j){
38     if(frames[j] == -1){
39         counter++;
40         faults++;
41         frames[j] = pages[i];
42         time[j] = counter;
43         flag2 = 1;
44         break;
45     }
46 }
47 }
48 if(flag2 == 0){
49     pos = findLRU(time, no_of_frames);
50     counter++;
51     faults++;
52     frames[pos] = pages[i];
53     time[pos] = counter;
54 }
55 printf("\n");
56 for(j = 0; j < no_of_frames; ++j){
57     printf("%d\t", frames[j]);
58 }
59 }
60 printf("\n\nTotal Page Faults = %d", faults);
61 return 0;
62 }
```

Enter number of frames: 4

Enter number of pages: 20

Enter reference string: 7 0 1 2 0 3 0 4 2 3 0 3 2 1 2 0 1 7 0 1

7	-1	-1	-1
7	0	-1	-1
7	0	1	-1
7	0	1	2
7	0	1	2
3	0	1	2
3	0	1	2
3	0	4	2
3	0	4	2
3	0	4	2
3	0	4	2
3	0	4	2
3	0	4	2
3	0	1	2
3	0	1	2
3	0	1	2
3	0	1	2
7	0	1	2
7	0	1	2
7	0	1	2

Total Page Faults = 8

Process exited after 54.53 seconds with return value 0

Press any key to continue . . .