

LRU

```
#include<stdio.h>

int findLRU(int time[], int n){

int i, minimum = time[0], pos = 0;

for(i = 1; i < n; ++i){

if(time[i] < minimum){

minimum = time[i];

pos = i;

}

}

return pos;

}

int main()

{

    int no_of_frames, no_of_pages, frames[10], pages[30], counter = 0, time[10],

flag1, flag2, i, j, pos, faults = 0;

printf("Enter number of frames: ");

scanf("%d", &no_of_frames);

printf("Enter number of pages: ");

scanf("%d", &no_of_pages);

printf("Enter reference string: ");

    for(i = 0; i < no_of_pages; ++i){

        scanf("%d", &pages[i]);

    }

for(i = 0; i < no_of_frames; ++i){
```

```
frames[i] = -1;
```

```
}
```

```
for(i = 0; i < no_of_pages; ++i){
```

```
flag1 = flag2 = 0;
```

```
for(j = 0; j < no_of_frames; ++j){
```

```
if(frames[j] == pages[i]){
```

```
counter++;
```

```
time[j] = counter;
```

```
flag1 = flag2 = 1;
```

```
break;
```

```
}
```

```
}
```

```
if(flag1 == 0){
```

```
for(j = 0; j < no_of_frames; ++j){
```

```
if(frames[j] == -1){
```

```
counter++;
```

```
faults++;
```

```
frames[j] = pages[i];
```

```
time[j] = counter;
```

```
flag2 = 1;
```

```
break;
```

```
}
```

```
}  
  
}  
  
if(flag2 == 0){  
    pos = findLRU(time, no_of_frames);  
    counter++;  
    faults++;  
    frames[pos] = pages[i];  
    time[pos] = counter;  
}  
  
printf("\n");  
  
for(j = 0; j < no_of_frames; ++j){  
    printf("%d\t", frames[j]);  
}  
}  
  
printf("\n\nTotal Page Faults = %d", faults);  
  
return 0;  
}
```

OUTPUT:

```
guest-lz0eRo@ubuntu:~ Search Terminal Help 12:26 AM
guest-lz0eRo@ubuntu:~$ gcc ospr6.c -lpthread
guest-lz0eRo@ubuntu:~$ ./a.out
Enter number of frames: 3
Enter number of pages: 10
Enter reference string: 4
7
6
1
7
6
1
2
7
2
4      -1      -1
4      7      -1
4      7      6
1      7      6
1      7      6
1      7      6
1      2      6
1      2      7
1      2      7
Total Page Faults = 6guest-lz0eRo@ubuntu:~$
```