```c
#include<stdio.h>

struct frmnode
{
        int pno, counter;
} frames[20];

int n;

int page_found(int pno)
{
        int fno;
        for(fno = 0; fno < n; fno++)
                if(frames[fno].pno == pno)
                        return fno;

        return -1;
}

int get_free_frame()
{
        int fno;
        for(fno = 0; fno < n; fno++)
                if(frames[fno].pno == -1)
                        return fno;

        return -1;
}

int get_lru_frame()
{
        int lrufno = 0, fno;
        for(fno = 1; fno < n; fno++)
                if(frames[fno].counter < frames[lrufno].counter)
                        lrufno = fno;

        return lrufno;
}

void main()
{
        int p_request[] = {12, 15, 12, 18, 6, 8, 11, 12, 19, 12, 6, 8, 12, 15, 19,
8};
        int size = 16;
        int page_falts = 0, currtime = 0, i, j, fno;

        printf("How many frames : ");
        scanf("%d", &n);

        for(i = 0; i < n; i++)
```

```c
            frames[i].pno = -1;

    printf("\nPage No\t\tPage Fault\tPage Frames");
    printf("\n----------------------------------");

    for(i = 0; i < size; i++)
    {
            j = page_found(p_request[i]);

            if(j == -1)
            {
                    page_falts++;
                    j = get_free_frame();
                    if(j == -1)
                            j = get_lru_frame();
                    frames[j].pno = p_request[i];
                    frames[j].counter = currtime;

                    printf("\n%d\t\tYES\t", p_request[i]);
            }
            else
            {
                    frames[j].counter = currtime;
                    printf("\n%d\t\tNO\t", p_request[i]);
            }

            for(fno = 0; fno < n; fno++)
                    printf("\t%d : %d\t", frames[fno].pno,
frames[fno].counter);
            currtime++;
    }

    printf("\n----------------------------------");
    printf("\nTotal no of page faults : %d\n", page_falts);
}
```