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/* Least recently used page replacement */

#include<stdio.h>
#include<stdlib.h>

int referenceArray[25];
int frameArray[5];
int pagefault=0;
int n,m;
int isPageFault(int a){
    for(int l=0;l<m;l++){
        if(frameArray[l] == a){
            return 0;
        }
    }
    pagefault++;
    return 1;
}

void main(){
    int i,j;
    printf("\n  LRU Page Replacement");
    printf("\n  ----- \n");
    printf("\n  Enter number of pages: ");
    scanf("%d",&n);
    printf("\n  Enter number of frames: ");
    scanf("%d",&m);
    printf("\n  Enter reference string: ");
    for(i = 0;i < n;i++) {
        scanf("%d",&referenceArray[i]);
    }
    for(i = 0;i < m;i++) {
        frameArray[i] = - 1;
    }
    j = 0;
    for(i = 0;i < n;i++) {
        if(isPageFault(referenceArray[i])){
            frameArray[j] = referenceArray[i];
            j = (j + 1)%m;
        }
        printf("  %d: ",referenceArray[i]);
        for(int p = 0;p < m;p++){
            printf("%d", frameArray[p]);
            if(p != m-1){
                printf(" , ");
            }
        }
        printf("\n");
    }
}
```

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    printf("\n Total page fault: %d",pagefault);  
    printf("\n\n");  
}
```