#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;

}