#include <stdio.h>

#include <stdlib.h>

#define Frame\_Size 3

int main() {

int page\_faults = 0, i, j;

int memory[Frame\_Size];

int page\_queue[] = {3, 5, 0 ,5, 7, 8};

int num\_pages = sizeof(page\_queue) / sizeof(int);

for (i = 0; i < num\_pages; i++) {

int page = page\_queue[i];

int page\_found = 0;

for (j = 0; j < Frame\_Size; j++) {

if (memory[j] == page) {

page\_found = 1;

break;

}

}

if (!page\_found) {

page\_faults++;

for (j = Frame\_Size - 2; j >= 0; j--) {

memory[j + 1] = memory[j];

}

memory[0] = page;

}

}

printf("Total amount of page faults: %d\n", page\_faults);

printf("Memory: ");

for (i = 0; i < Frame\_Size; i++) {

printf("%d ", memory[i]);

}

printf("\n");

return 0;

}