#include <stdio.h>

int main() {

int incomingstream[] = {7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 3};

int pageFaults = 0;

int frames = 4;

int m, n, s, pages;

pages = sizeof(incomingstream) / sizeof(incomingstream[0]);

printf("Incoming\tFrame 1\tFrame 2\tFrame 3\tFrame 4\n");

int temp[frames];

for (m = 0; m < frames; m++) {

temp[m] = -1;

}

for (m = 0; m < pages; m++) {

s = 0;

for (n = 0; n < frames; n++) {

if (incomingstream[m] == temp[n]) {

s = 1;

break;

}

}

if (s == 0) {

int emptyIndex = -1;

for (n = 0; n < frames; n++) {

if (temp[n] == -1) {

emptyIndex = n;

break;

}

}

if (emptyIndex != -1) {

temp[emptyIndex] = incomingstream[m];

} else {

int farthest = -1;

int indexToReplace = -1;

for (n = 0; n < frames; n++) {

int j;

int found = 0;

for (j = m + 1; j < pages; j++) {

if (temp[n] == incomingstream[j]) {

if (j > farthest) {

farthest = j;

indexToReplace = n;

}

found = 1;

break;

}

}

if (!found) {

indexToReplace = n;

break;

}

}

temp[indexToReplace] = incomingstream[m];

}

pageFaults++;

}

printf("%d\t\t", incomingstream[m]);

for (n = 0; n < frames; n++) {

if (temp[n] != -1) {

printf("%d\t\t", temp[n]);

} else {

printf("-\t\t");

}

}

printf("\n");

}

printf("Total Page Faults:\t%d\n", pageFaults);

return 0;

}

OUTPUT :  
  
Incoming Frame 1 Frame 2 Frame 3 Frame 4

7 7 - - -

0 7 0 - -

1 7 0 1 -

2 7 0 1 2

0 7 0 1 2

3 3 0 1 2

0 3 0 1 2

4 3 0 4 2

2 3 0 4 2

3 3 0 4 2

0 3 0 4 2

3 3 0 4 2

2 3 0 4 2

3 3 0 4 2

Total Page Faults: 6