**LRU:**

import java.util.ArrayList;

import java.util.Scanner;

public class LRU {

public static void main(String args[]) {

Scanner sn = new Scanner(System.in);

// Input for number of frames

System.out.print("\nEnter How Many Frames You Want: ");

int frame = sn.nextInt();

// Input for number of pages

System.out.print("How Many Pages You Want: ");

int pg = sn.nextInt();

// Input the pages

System.out.print("\nEnter Pages: ");

int pages[] = new int[pg];

for (int i = 0; i < pg; i++) {

pages[i] = sn.nextInt();

}

// List to hold the current frames

ArrayList<Integer> s = new ArrayList<>(frame);

int pagefault = 0; // Counter for page faults

// Process each page

for (int i : pages) {

// Check if the page is not present in the frame (Page Fault)

if (!s.contains(i)) {

// If the frame is full, remove the least recently used page (first element)

if (s.size() == frame) {

s.remove(0);

}

// Add the new page

s.add(i);

pagefault++; // Increment page fault counter

} else {

// If the page is already in the frame (Page Hit), move it to the most recent position

s.remove((Integer) i); // Use wrapper class to remove the object, not the index

s.add(i);

}

}

// Output the number of page faults

System.out.println("Page Faults: " + pagefault);

sn.close(); // Closing the Scanner

}

}