```
package ass7LRU;
import java.util.*;

public class ass7LRU {
  public static void main(String[] args) {
   Scanner sc = new Scanner(System.in);
   ArrayList<Integer> arr = new ArrayList<>();
   int noofpages, capacity, hit = 0, fault = 0, index = 0;
   boolean isFull = false;
   double hitRatio, faultRatio;
   System.out.print("Enter the number of pages you want to enter: ");
   noofpages = sc.nextInt();
   int pages[] = new int[noofpages];
   for (int i = 0; i < noofpages; i++) {
    pages[i] = sc.nextInt();
   }
   System.out.print("Enter the capacity of frame: ");
   capacity = sc.nextInt();
   int frame[] = new int[capacity];
   int table[][] = new int[noofpages][capacity];
   for (int i = 0; i < capacity; i++) {
    frame[i] = -1;
   }
   System.out.println("--------------------------------------------------------------------------");
   for (int i = 0; i < noofpages; i++) {
    if (arr.contains(pages[i])) {
     arr.remove((Integer) pages[i]);
    }
    arr.add(pages[i]);
    int search = -1;
    for (int j = 0; j < capacity; j++) {
     if (frame[j] == pages[i]) {
      search = j;
      hit++;
      System.out.printf("%4s", "H");
      break;
     }
    }
    if (search == -1) {
     if (isFull) {
      int min_loc = noofpages;
      for (int j = 0; j < capacity; j++) {
       if (arr.contains(frame[j])) {
        int temp = arr.indexOf(frame[j]);
        if (temp < min_loc) {
         min_loc = temp;
         index = j;
        }
       }
      }
     }
     frame[index] = pages[i];
     fault++;
     System.out.printf("%4s", "F");
     index++;
```

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    if (index == capacity) {
     index = 0;
     isFull = true;
    }
   }
   System.arraycopy(frame, 0, table[i], 0, capacity);
  }
  System.out.println("\n---------------------------------------------------------------------------");
  for (int i = 0; i < capacity; i++) {
   for (int j = 0; j < noofpages; j++)
    System.out.printf("%3d ", table[j][i]);
   System.out.println();
  }

  System.out.println("---------------------------------------------------------------------------");
  hitRatio = ((double) hit / noofpages) * 100;
  faultRatio = ((double) fault / noofpages) * 100;
  System.out.println("Page Fault: " + fault + "\nPage Hit: " + hit);
  System.out.printf("Hit Ratio:%.2f \nFault Ratio:%.2f ", hitRatio, faultRatio);
  sc.close();

 }
}
```