# Program:

import java.util.\*;

public class FIFO {

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int noofpages,capacity,index=0;

int hit=0,fault=0;

double faultRatio,hitRatio;

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("\n----------------------------------------------------------------------");

for(int i=0;i<noofpages;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)

{

frame[index] = pages[i];

fault++;

System.out.printf("%4s","F");

index++;

if(index == capacity){

index = 0;

}}

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("----------------------------------------------------------------------");

faultRatio=((double)fault/noofpages)\*100;

hitRatio=((double)hit/noofpages)\*100;

System.out.println("Page Fault: "+fault+"\nPage Hit: "+hit);

System.out.printf("Hit Ratio:%.2f \nFault Ratio:%.2f ",hitRatio,faultRatio);

}}

**OUTPUT: -**

Enter the number of pages you want to enter: 13

7 0 1 2 0 3 0 4 2 3 0 3 2

Enter the capacity of frame: 4

-----------------------------------------------------------------

F F F F H F H F H H F H H

-----------------------------------------------------------------

7 7 7 7 7 3 3 3 3 3 3 3 3

-1 0 0 0 0 0 0 4 4 4 4 4 4

-1 -1 1 1 1 1 1 1 1 1 0 0 0

-1 -1 -1 2 2 2 2 2 2 2 2 2 2

-----------------------------------------------------------------

Page Fault: 7

Page Hit: 6

Hit Ratio:46.15

Fault Ratio:53.85