```
import java.io.*;


public class FIFO {

    public static void main(String[] args) throws IOException {

        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
        int frames, pointer = 0, hit = 0, fault = 0, ref_len;
        int buffer[];
        int reference[];
        int mem_layout[][];
        System.out.println("Please enter the number of Frames: ");
        frames = Integer.parseInt(br.readLine());
        System.out.println("Please enter the length of the Reference string: ");
        ref_len = Integer.parseInt(br.readLine());

        reference = new int[ref_len];
        mem_layout = new int[ref_len][frames];
        buffer = new int[frames];
        for (int j= 0; j< frames; j++)
            buffer[j]= -1;


        System.out.println("Please enter the reference string: ");
        for (int i = 0; i < ref_len; i++){
            reference[i] = Integer.parseInt(br.readLine());
        }
        System.out.println();
        for (int i = 0; i < ref_len; i++){
```

```
int search=-1;

for(int j=0; j<frames; j++){

   if(buffer[j]==reference[i]){

      search= j;

      hit++;

      break;

   }

}

if(search==-1){

   buffer[pointer]=reference[i];

   fault++;

   pointer++;

   if(pointer==frames)

      pointer=0;

   }

   for(int j=0; j<frames; j++)

      mem_layout[i][j]=buffer[j];

}


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

   for(int j=0; j<ref_len; j++)

      System.out.printf("%3d", mem_layout[j][i]);

   System.out.println();

}


System.out.println("The number of Hits:" +hit);
```

```
        System.out.println("Hit Ratio: " +(float) ((float) hit / ref_len));
        System.out.println("The number of Faults: " + fault);
    }
}
```