LRU SOURCE CODE

import java.util.\*;  
class LruAlgo  
{  
int p[],n,fr[],m,fs[],index,k,l,flag1=0,flag2=0,pf=0,frsize=3,i,j;  
Scanner src=new Scanner(System.in);  
void read()  
{  
  
System.out.println("Enter page table size");  
n=src.nextInt();  
p=new int[n];  
System.out.println("Enter element in page table");  
for(int i=0;i<n;i++)  
p[i]=src.nextInt();  
  
System.out.println("Enter page frame size");  
m=src.nextInt();  
fr=new int[m];  
fs=new int[m];  
}  
  
void display()  
{  
  
System.out.println("\n");  
for(i=0;i<m;i++)  
{  
  
if(fr[i]==-1)  
System.out.println("[ ]");  
else  
System.out.println("["+fr[i]+"]");  
}  
}  
  
void lru()  
{  
for(i=0;i<m;i++)  
 {  
fr[i]=-1;  
}  
for(j=0;j<n;j++)  
 {  
flag1=0;flag2=0;  
for(i=0;i<m;i++)  
 {  
if(fr[i]==p[j])  
{  
flag1=1;  
flag2=1;  
break;  
}  
}  
if(flag1==0)  
{  
for(i=0;i<m;i++)  
 {  
if(fr[i]==-1)  
{  
fr[i]=p[j];  
flag2=1;  
break;  
}  
}  
}  
if(flag2==0)  
{  
for(i=0;i<3;i++)  
fs[i]=0;  
for(k=j-1,l=1;l<=frsize-1;l++,k--)  
{  
for(i=0;i<3;i++)  
{  
if(fr[i]==p[k])  
fs[i]=1;  
}  
}  
for(i=0;i<3;i++)  
{  
if(fs[i]==0)  
index=i;  
}  
fr[index]=p[j];  
pf++;  
}  
System.out.print("Page : "+p[j]);  
display();  
}  
System.out.println("\n no of page faults :"+pf);  
}  
  
public static void main(String args[])  
{  
LruAlgo a=new LruAlgo();  
a.read();  
a.lru();  
a.display();  
}  
}

Output

D:\My Documents\college assg\o.s\programs>javac LruAlgo.java  
  
D:\My Documents\college assg\o.s\programs>java LruAlgo  
Enter page table size  
10  
Enter element in page table  
1  
5  
1  
2  
6  
2  
7  
1  
5  
1  
Enter page frame size  
3  
Page : 1  
  
[1]  
[ ]  
[ ]  
Page : 5  
  
[1]  
[5]  
[ ]  
Page : 1  
  
[1]  
[5]  
[ ]  
Page : 2  
  
[1]  
[5]  
[2]  
Page : 6  
  
[1]  
[6]  
[2]  
Page : 2  
  
[1]  
[6]  
[2]  
Page : 7  
  
[7]  
[6]  
[2]  
Page : 1  
  
[7]  
[1]  
[2]  
Page : 5  
  
[7]  
[1]  
[5]  
Page : 1  
  
[7]  
[1]  
[5]  
  
no of page faults :4  
  
  
[7]  
[1]  
[5]