

```
import java.util.Scanner;

public class LRU {
    public static void main(String args[]) {
        int ref[], frame[];
        int n, m, j = 0, hit = 0;

        Scanner it = new Scanner(System.in);

        System.out.println("Enter the string size : ");
        n = it.nextInt();

        System.out.println("Enter the frame size : ");
        m = it.nextInt();

        ref = new int[n];
        frame = new int[m];

        for (int i = 0; i < m; i++) {
            frame[i] = -1;
        }

        System.out.println("Enter the reference string : ");
        for (int i = 0; i < n; i++) {
            ref[i] = it.nextInt();
        }

        System.out.print("\nReference string : ");
        for (int i = 0; i < n; i++) {
```

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    System.out.print(ref[i] + " ");  
}
```

```
System.out.println("\n\n-----LRU-----\n");
```

```
int u = n;  
int flag = 0;  
int i = 0;  
int d = -1;  
int min = Integer.MAX_VALUE;  
int set = 0;  
int f = 0;
```

```
while (f < m) {  
    for (int k = 0; k < m; k++) {  
        if (ref[j] == frame[k]) {  
            set = 1;  
        }  
    }  
}
```

```
if (set != 1) {  
    frame[f] = ref[j];  
    f++;  
}
```

```
System.out.print "[" + ref[j] + " ] ";
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```
for (int a = 0; a < m; a++) {  
    System.out.print(frame[a] + " |");  
}
```

```

        System.out.print(" <---Miss\n");

        j++;

    } else {

        set = 0;

        hit++;

        System.out.print "[" + ref[j] + "  ");

        for (int a = 0; a < m; a++) {

            System.out.print(frame[a] + " |");

        }

        System.out.print(" <---Hit\n");

        j++;

    }

}

u = j;

while (j < n) {

    System.out.print "[" + ref[j] + "  ");

    for (int b = 0; b < m; b++) {

        if (j < n && ref[j] == frame[b]) {

            flag = 1;

```

```

        hit++;
    }
}

min = Integer.MAX_VALUE;

for (int a = 0; a < m; a++) {
    for (int c = 0; c < j; c++) {
        if (frame[a] == ref[c]) {
            d = c;
        }
    }

    if (min > d && d != -1) {
        min = d;
    }
}

if (flag != 1) {
    for (int a = 0; a < m; a++) {
        if (frame[a] == ref[min]) {
            frame[a] = ref[j];
        }
    }

    for (int a = 0; a < m; a++) {
        System.out.print(frame[a] + " |");
    }
}

```

```

        System.out.print(" <---Miss\n");
    } else {
        flag = 0;

        for (int a = 0; a < m; a++) {
            System.out.print(frame[a] + " |");
        }

        System.out.print(" <---Hit\n");
    }

    j++;

}

System.out.println("\nTotal Hits : " + hit);
System.out.println("Total Miss : " + (n - hit));

System.out.print("\n-----");
}
}

```