

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

```