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//FIFO
/* Page Replacement Policy FIFO */
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];
        }
    }
}

```

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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);
}

}
```