```java
import java.util.Scanner;
public class Bankers{
    private int need[][],allocate[][],max[][],avail[][],np,nr;

    private void input(){
     Scanner sc=new Scanner(System.in);
     System.out.print("Enter no. of processes and resources : ");
     np=sc.nextInt();  //no. of process
     nr=sc.nextInt();  //no. of resources
     need=new int[np][nr];  //initializing arrays
     max=new int[np][nr];
     allocate=new int[np][nr];
     avail=new int[1][nr];

     System.out.println("Enter allocation matrix -->");
     for(int i=0;i<np;i++)
         for(int j=0;j<nr;j++)
         allocate[i][j]=sc.nextInt();  //allocation matrix

     System.out.println("Enter max matrix -->");
     for(int i=0;i<np;i++)
         for(int j=0;j<nr;j++)
         max[i][j]=sc.nextInt();  //max matrix

      System.out.println("Enter available matrix -->");
      for(int j=0;j<nr;j++)
       avail[0][j]=sc.nextInt();  //available matrix

      sc.close();
    }

    private int[][] calc_need(){
      for(int i=0;i<np;i++)
        for(int j=0;j<nr;j++)  //calculating need matrix
         need[i][j]=max[i][j]-allocate[i][j];

      return need;
    }

    private boolean check(int i){
      //checking if all resources for ith process can be allocated
      for(int j=0;j<nr;j++)
      if(avail[0][j]<need[i][j])
        return false;

    return true;
    }

    public void isSafe(){
      input();
      calc_need();
      boolean done[]=new boolean[np];
      int j=0;

      while(j<np){  //until all process allocated
```

```java
        boolean allocated=false;
        for(int i=0;i<np;i++)
         if(!done[i] && check(i)){  //trying to allocate
            for(int k=0;k<nr;k++)
            avail[0][k]=avail[0][k]-need[i][k]+max[i][k];
         System.out.println("Allocated process : "+i);
         allocated=done[i]=true;
             j++;
            }
         if(!allocated) break;  //if no allocation
        }
        if(j==np)  //if all processes are allocated
         System.out.println("\nSafely allocated");
        else
         System.out.println("All proceess cant be allocated safely");
    }

    public static void main(String[] args) {
        new Bankers().isSafe();
    }
}
```

```
java -cp /tmp/XcCBxl4PWt/Bankers
Enter no. of processes and resources : 3 3
Enter allocation matrix -->
1 2 2
1 0 3
1 2 1
Enter max matrix -->
3 3 2
1 1 3
1 3 5
Enter available matrix -->
3 1 1
Allocated process : 0
Allocated process : 1
Allocated process : 2

Safely allocated

=== Code Execution Successful ===
```