1. Application of priority queue and hash table

Sectara Company is developing a way to prioritize vulnerabilities from their system. You are a programmer who is given a task according to the request of the security team and project manager. The program that must be created is to determine the priority level of vulnerabilities and forward that priority to be processed on a virtual machine. The following are the provisions that must be met:

1. There is a vulnerability ID, impact and likelihood in each queue

2. There are priority provisions given in table 1.

3. Every time a process is carried out, the highest priority will be entered into a Virtual Machine (VM) to be processed

4. However, this VM determination uses a hash function to determine the VM number used

5. You can describe the VM as a hash table, and the company only has 10 VMs.

6. Use division technique to determine the index of hash table!

Table 1

Impact	Likelihood	Severity
1	1	Critical
1	0	High
0	1	Medium
0	0	Low

1 = High

0 = Low

Input :

Id (int), Impact (bool), Likelihood (bool)

3001, 0, 0
3002, 1, 1
3003, 1, 0
3004, 0, 1
3005, 1, 1

The following is an example of the expected output :

```
Vulnerability Queue:
ID: 3002 - Critical
ID: 3005 - Critical
ID: 3003 - High
ID: 3004 - Medium
ID: 3001 - Low

Vulnerability Queue:
ID: 3003 - High
ID: 3004 - Medium
ID: 3001 - Low

Processing vulnerabilities...

Stored Processed Vulnerabilities:
Index 2 -> ID: 3002
Index 5 -> ID: 3005

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Process exited after 1.364 seconds with return value 0
Press any key to continue . . .
```