Input:

```
{monitor_period}

patient {patient_name} {patient_period}

//the following input is 5 parameters in one line separated with
space.

{device_category} {device_name} {factor_dataset_file}
{safe_range_lower_bound} {safe_range_upper_bound}/*the
{device_name} is attached to {patient_name}*/

...
```

factorDataset format:

```
value //A factor value that should be read by device

... // many many line
```

factorDatabase format:

```
/*

factorDatabase must be shown with following rules:

1.patient should be shown with the sequential order from input.
2.device should be shown with the sequential order from input.
*/

patient {patient_name}

{device_category} {device_name}
```

```
{[millisecond from system start to monitor]} {read_factor_value}

...
```

Output:

```
/*

If two alarm messages are to appear on the same time stamp, they
should be displayed in the order of which patient and device
were inputted first.

*/

//the following output is in one line separated with space

{[millisecond from system start to monitor]} {patient_name} is
in danger! Cause: {device_name} {out_of_range_value}/*if read
factors exceed the safe ranges */

//the following output is in one line separated with space

{[millisecond from system start to monitor]} {device_name}
falls/*if factor read from device is -1 or end-of-file, it means
device falls.*/

...

display factorDatabase/*You must show factorDatabase contents
after system finish monitoring. The factorDatabase contents
would display at bottom of output.*/
```

Comment:

The first data read from factorDataset should have timestamp 0.

The unit of {monitor_period} is millisecond.

The unit of {patient_period} is millisecond.

Both {safe_range_lower_bound} and {safe_range_upper_bound} are inclusive.

device_category:

    PulseSensor

    BloodPressureSensor

    TemperatureSensor

You should read the input and factorDataset from file. And show output to standard output.

After you reach end-of-file in input file, system starts to monitor. While system starts to monitor, the timestamp is 0. System finish monitoring when the timestamp reach {monitor_period}. All devices attached to patients start to measure the patients' vital factors at timestamp 0.

You can use for-loop counter as millisecond timestamp.

There will be one value each line in the factorDataset file.

If you read -1 or end-of-file, it means device falls. If device falls, the value stored in database is -1.

A way to read input from System.in:

```
BufferedReader reader = new BufferedReader(new InputStreamReader(System.in));

String line = reader.readLine();
```

A way to read data from file:

```
File fakeDataFile = new File("name of the fake data");

BufferedReader reader = new BufferedReader(new FileReader(fakeDataFile));

String line = reader.readLine();
```

You are asked to write a main function in Class Quiz.

We'll test your program through "java Quiz inputFile"

e.g java Quiz sampleInput

Please zip your source code and upload it.

The file name should be [StudentID].zip. e.g. r05922096.zip

The folder structure should be:

```
    unzip r05922096.zip

=> [dir] r05922096

=>        r05922096/*.java
```

BloodPressureData1.dataset Sample:
150
123
-1
200
-1
sampleInput:
3000
patient Mark 600
BloodPressureSensor sensor1 BloodPressureData1.dataset 150 200
patient Tony 500
BloodPressureSensor sensor2 BloodPressureData1.dataset 130 150
sampleOutput:
[500] Tony is in danger! Cause: sensor2 123.0
[600] Mark is in danger! Cause: sensor1 123.0
[1000] sensor2 falls
[1200] sensor1 falls
[1500] Tony is in danger! Cause: sensor2 200.0
[2000] sensor2 falls
[2400] sensor1 falls
[2500] sensor2 falls
[3000] sensor1 falls
[3000] sensor2 falls
patient Mark
BloodPressureSensor sensor1
[0] 150.0
[600] 123.0
[1200] -1.0
[1800] 200.0
[2400] -1.0
[3000] -1.0

patient Tony
BloodPressureSensor sensor2
[0] 150.0
[500] 123.0
[1000] -1.0
[1500] 200.0
[2000] -1.0
[2500] -1.0
[3000] -1.0