level 2

Catalysts
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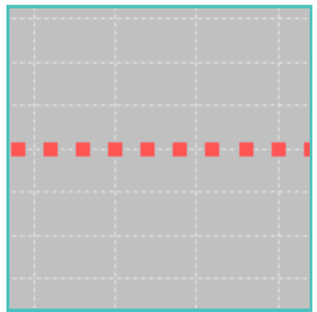
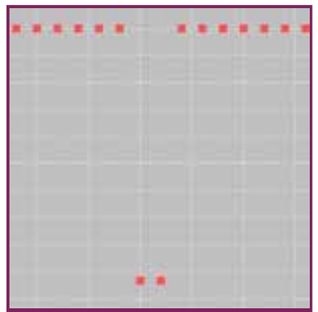
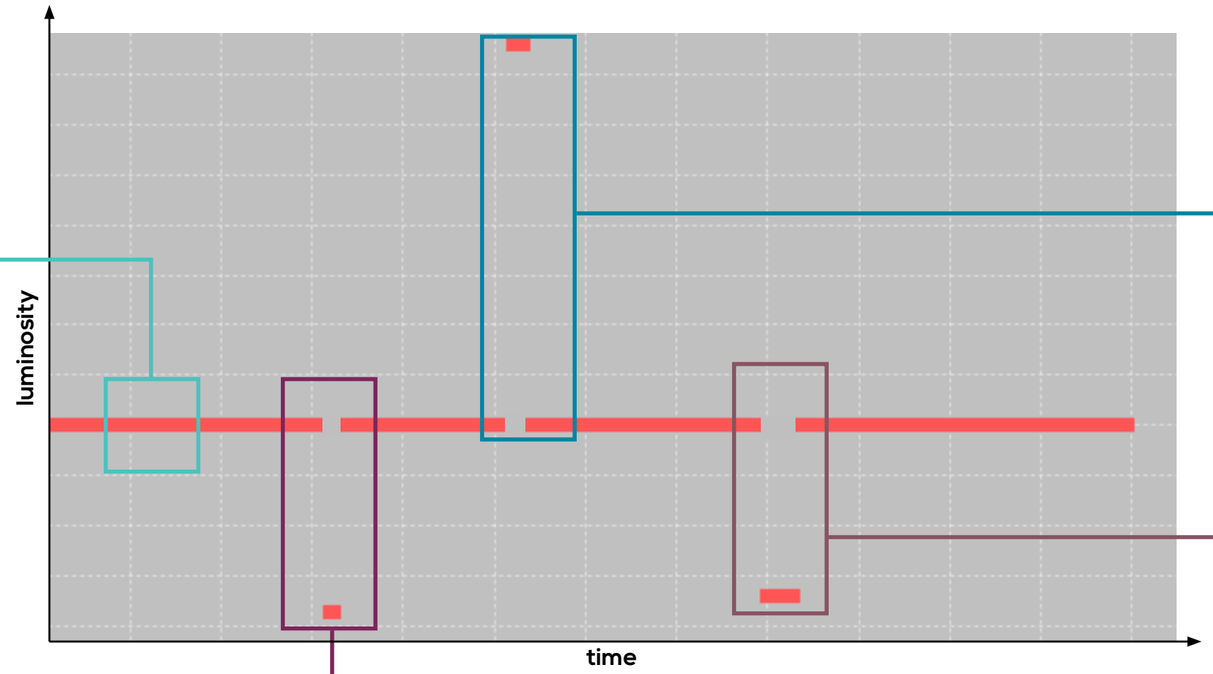
Now we'll need to analyse the light curve. Your task: Find all the events, and classify them.

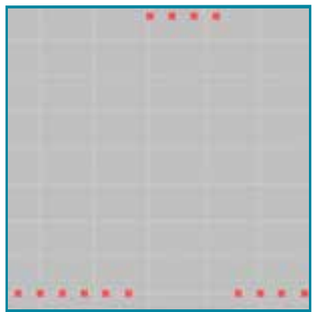


No event

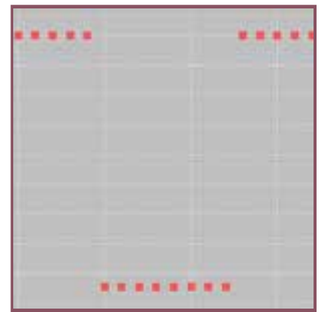


Event
change in the brightness of the star.





Solar flare
an event that increases the brightness of the star.



Transit feature
an event that dims the brightness of the star by at least 0.5%. Lasts at least 5 and at most 15 time units (inclusive).

Event example:

100 100 99 99 99 100 100 100

random event (neither solar flare or transit feature)

Solar flare example:

100 100 101 101 100 100 100

is a solar flare because it increases in value

Transit feature example:

100 100 75 75 75 75 75 100 100

decreases by at least 0.5%, has length of at least 5

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Input:

- format: same as for level 1
- file: same as for level 1

Input Example:

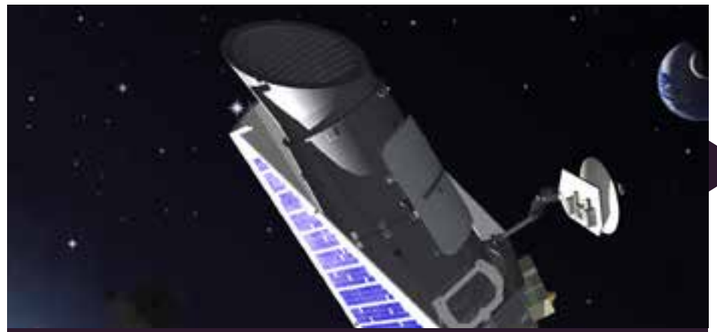
```
1 Star1 24 100 100 99 99 99 100 100 100 100 100 101 101 100 100 100 100 100 75 75 75 75 75 100 100
```

Output:

- starName1 [solarFlareCount] [transitFeatureCount] starName2 [solarFlareCount] [transitFeatureCount] ... starNamem [solarFlareCount] [transitFeatureCount]
- Output items are separated by space characters.
- The output has to be ordered the same way as the input.

Output Example

```
Star1 1 1
```



The Kepler Space Telescope is the first satelite made by NASA for detecting exoplanets

level 2

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Constraints (it is guaranteed that)**:**

- During a single event the luminosity is constant.
- Events (solar flares, transit features, or random events) do not overlap.
- There is a distance of at least 5 time units between two events.
- An event can last from 1 to 15 time units. (inclusive)
- There is a maximum of 5 events per star.
- The first element of the luminosity array is not part of an event.

Remember that

- Solar flares are events that increase the brightness of the star.
- Transit features are events that decrease the brightness of the star by at least 0.5% and have a length of at least 5.

Transit feature visualization