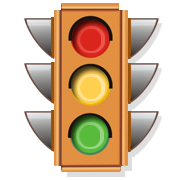
                                         Traffic Light Checker



A three-color traffic light must switch lights in the following order: red, green, yellow, red. To indicate when crossing slowly without a stop is permitted, the yellow signal may be flashed. To indicate when crossing immediately after a full stop is permitted, the red signal may be flashed. Either flash sequence may only be started after the red light is lit and must be followed with a red. All lights are initially off. All sequences must begin a red light. Lighting any light causes all other lights to turn off.  No color may be repeated: e.g., red, red is not allowed.

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| --- | --- |
| For example, here are some valid sequences:  • Red, Green, Yellow, Red, Green, Yellow, Red  • Red, Green, Yellow, Red, Pause | Here are some invalid sequences:  • Red, Green, Yellow, Red, Yellow  • Green, Caution, Red, Green, Yellow, Red  • Red, Green, Yellow, Yellow, Red, Red |

Task

Write a program that checks a sequence of light codes and determines if that sequence follows or violates the traffic light rules.

Input

Read from STDIN a sequence of the follow codes:  R (red), Y (yellow), G (Green),  P (Pause - flash red),  C (Caution - flash yellow), and X (off). Each code must be separated with a space.  The entire sequence is submitted by an end-of-line (e.g., pressing the Enter key.)  A sequence must have no more than 15 codes in total.

Output

Write to STDOUT an evaluation of the sequence:

*ACCEPT*The entire input sequence meets all rules.

*REJECT*The input sequence violates any sequence constraint; for example G Y.

*ERROR*The input is malformed – undefined code, too short, too long, etc.

Example

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Note (reference only)** |
| R G Y R C R G Y R | ACCEPT |  |
| G Y R G Y R | REJECT | Doesn’t start with R |
| R Y G P | REJECT | Invalid sequence |
| RGY | ERROR | Undefined code |
| X 8 S | ERROR | Undefined codes |
| R G Y R C R P R G Y R G Y R G Y R | ERROR | Too many codes |