Of Brackets & Boxes

The BigCo Bracket Company, one of the world's largest suppliers of brackets, hinges and fittings, has lately been experiencing problems in its manufacturing division, with a large number or brackets lost or broken in transit owing to faulty packaging at the end of the line.

Investigations into the cause of the problem have led to an ancient program controlling the packaging machinery. This program is responsible for selecting the type of packaging a given bracket should be shipped in, based on input from an array of sensors on the production line. It then sends a description of the package to the packager itself, which packs the bracket and sends it on to shipping. The description is a simple text string, made up of brackets with the following format:

```
(B) - Bracket in a soft wrapping
[B] - Bracket in a cardboard box
{B} - Bracket in a wooden box
```

Often, brackets have multiple layers of packaging for protection, for example:

```
{(B)} - Soft-wrapped bracket in a wooden box
[{B}] - Wooden-boxed bracket with cardboard outer

[{(B)}{(B)(B)}] - Wooden boxed single and double bracket packs with soft
inner wrap, in cardboard outer.
```

Now, the problem is that this venerable program has for some reason begun to output malformed packaging descriptions, occasionally missing off a bracket, for example:

```
[{B]
```

or:

```
{(B)}{(B)(B)}]
```

What can be done?

Your mission, should you choose to accept it, is to write a brand new program to check the output of the ancient packing code. Your program should operate in two modes:

* Simple: check the description, and return exitcode indicating it's okay (0) or bad (1).
* Complex: fix the description, if possible, and print it to stdout.