Exercise 11. *Deadline: 1 June 2009.*

COURSE OF C++ PROGRAMMING LANGUAGE

MANIPULATORS

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Exercise

A programmer can add *manipulators* in the style of the standard ones. Define 5 your own manipulators:

- `clearline`
  The `clearline` manipulator should remove characters from an input stream one by one until it removes a newline character, unless the stream ends earlier.
- `ignore(int)`
  The `ignore(x)` manipulator should remove `x` characters from an input stream one by one, unless it encounters a newline character or the stream ends earlier.
- `colon`
  The `colon` manipulator should write `": "` into an output stream.
- `comma`
  The `comma` manipulator should write `", "` into an output stream.
- `index(int)`
  The `index(i)` manipulator should write `"[i]"` into an output stream (number `i` in square brackets).

Apart from this manipulators, write a short program which will test it on the standard input and standard output streams.

Suggestion

Partition your code into the header and source files.

Hint

Some information about manipulators defined in STL can be found on the webpages:

`http://www.cplusplus.com/reference/iostream/manipulators/`