/* C/C++ */

Using the book's RE notation (*a* a character, *A*, *B* REs, Π a subset of the alphabet Σ , ...), eg:

$$\lambda, a, A, AB, A^+, A^k \ (k > 0), \ (A|\Pi*)$$

write a regular expression for C/C++ multiline comments that begin with /*, end with */ and may contain *s and /s.

Hint: for clarity let $\alpha = *$ so that it may be distinguished from the RE Kleene operator.

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Let $\alpha = *$ $\Pi = \Sigma - \{/, \alpha\}$ (everything but / and *)

 $/\alpha(/|\Pi|\alpha^{+}\Pi)\ast\alpha^{+}/$

/* C/C++ */

Let $\alpha = * \quad \Pi = \Sigma - \{/, \alpha\}$ (everything but / and *) $/\alpha (/|\Pi|\alpha^{+}\Pi) * \alpha^{+}/$ Begins with /* / α The middle does not contain */ (/|\Pi|\alpha^{+}\Pi) * $\alpha^{+}/$ Ends with */ $\alpha^{+}/$

The middle can be thought of as **either**:

- a sequence of characters not containing a */ or
- a sequence of characters that does not end with */