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Proposal to add the multiline option to std::regex for its ECMAScript engine

Introduction and Motivation

std::regex in the C++ standard has an engine that recognizes the ECMAScript grammer. But unlike the original

RegExp of ECMAScript, this engine does not have a way to switch the behaviors of the regular expressions ^ and \$,

because there is not any option corresponding to the multiline property in ECMAScript. To fix this incompatibility

and to make the behavior of this engine more compatible with the original RegExp of ECMAScript, I propose

adding an option to std::regex for switching the behaviors of the regular expressions ^ and \$.

Proposed Addition

1. To syntax_option_type [28.5.1]:

constexpr syntax_option_type multiline = unspecified;

2. To Table 138 [28.5.1]:

Element: multiline

Effect(s) if set: Specifies that ^ shall match the beginning of every line and \$ shall match the end of every line,

if the ECMAScript engine is specified.

Relevant Information

I reported this as a library issue once and it was listed as Issue #2503, but based on a recommendation I submit

this matter as a proposal.