

HOMEWORK II

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Question 1

(1) `{SLASH}{STAR}[^(*/)]*{STAR}{SLASH}`

- Good: This pattern doesn't allow '(', '*', '/', and ')' in the comment body
 - Example: `/(a*)**/` is legal but not allowed by this pattern

(2) `{SLASH}{STAR}{.}*{STAR}{SLASH}`

- Bad: This pattern allows the comment body to include `(*/)`
 - Example: `/***/` is illegal but allowed by this patternBecause `(.)` can match any character, then it can be `[*]` and `[/]`

(3) `{SLASH}{STAR}([^*]*{STAR}+[^*/])*{STAR}+{SLASH}`

- Good: This pattern doesn't allow the non-empty comment body without `*`
 - Example: `/*a*/` is legal but not allowed by this pattern

(4) `{SLASH}{STAR}([^*]|[^*/])+{STAR}{SLASH}`

- Good: This pattern doesn't allow the empty comment body
- Bad: This pattern allows the comment body to include `(*/)`
 - Good Example: `/**/` is legal but not allowed by this pattern
 - Bad Example: `/***/` is illegal but allowed by this pattern

(5) `{SLASH}{STAR}[^*]*{STAR}+{SLASH}+`

- Good: This pattern doesn't allow `'*'` in the comment body
- Bad: This pattern allows the end with one more slash after `*/`
 - Good Example: `/***/` is legal but not allowed by this pattern
 - Bad Example: `/**//` is illegal but allowed by this pattern

Question 2

$\{SLASH\}\{STAR\}(\{STAR\}^{*}[^{*}/]+\{SLASH\}^{*})^{*}\{STAR\}+\{SLASH\}$