Nikola Peevski CS 536 Homework 2

Question 1 As per definition a comment starts with /\* and ends with \*/. In the body it can include everything excluding a \* followed by /

- 1.  $\{SLASH\}\{STAR\}([^*]^*\{STAR\}+[^*/])^*\{STAR\}+\{SLASH\}\}$  matches good comment, debatably,  $/^{**}/$ . No comments with body are allowed in this expression.
- 2.  $\{SLASH\}\{STAR\}([^*]|[^/])+\{STAR\}\{SLASH\}\}$  matches every comment with body. Comments without body are excluded, which shouldn't be the case. /\*\*/ is not matched. /\*potato\*/ is matched but so is /\*pota/\*\*/to and /\*po\*/ta\*/to\*/, which are bad comments. It does not separate two sequential comments, eg. /\*\*//\*\*/ and counts them as a single comment.
- 3. {SLASH}{STAR}(.)\*{STAR}{SLASH} The same case as no2 but the difference is that it includes good comments without body, /\*\*/.
- 4. {SLASH}{STAR}([^\*]|({STAR}+[^\*/]))\*{STAR}+{SLASH} Matches almost everything properly but allows bad comments such as /\*pot/\*ato/\* which include /\* multiple times.
- 5. {SLASH}{STAR}[^(\*/)]\*{STAR}{SLASH} Matches almost everything properly. It does not allow for bad comments such as /\*pot/\*ato/\* and separates two sequential comments. It does not, however, allow for comments that include the \* in the body. For example this is a good comment treated as a bad comment:

/\*This is the header

- \* This is some body
- \* And I end it like this\*/

Question2.

A possible expression will be:  $(\#|\/\/)+(.)*?[\r\n]$