

Assignment 3

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CECS-524-Advance topics in Programming Language

September 17, 2018

Question 1: Write regular expression to capture the hexadecimal floating-point values. A hexadecimal floating-point value begins with 0x or 0X, may contain the digits 0-9 and a-f/A-F, and has an optional fractional portion (beginning with a dot) and a mandatory exponent (beginning with P or p). There may be digits to the left of the dot, the right of the dot, or both, and the exponent itself is given in decimal (contains only the digits 0-9), with an optional leading + or - sign. A hexadecimal floating-point value may end with an optional F or f (indicating “long”-single precision) or L or l (indicating “long”-double precision). With using the following expressions only;

1. A character
2. The empty string
3. Parenthesis
4. Concatenation
5. “or”
6. Kleene star. (Please use superscript star symbols, *)

Answer ::

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[0x|0X] [0|1|2|3|4|5|6|7|8|9|a|b|c|d|e|f|A|B|C|D|E|F]*  
[ε|. ] [0|1|2|3|4|5|6|7|8|9|a|b|c|d|e|f|A|B|C|D|E|F]*  
[P|p] [ε|+|-] [0|1|2|3|4|5|6|7|8|9]* [ε|f|F|l|L]
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