

Assignment - 1

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Section: 09

Ans. to Q No - 1

(a) $01(01112)^*01$

(b) Let, $A = (011)$

So, $(A^*101A^*000A^*) \mid (A^*000A^*101A^*)$

(c) $((011)(011)0)^+ (011)? (011)?$

(d) 0^*1^*

(e) $\epsilon \mid 0 \mid 1 \mid (011)^* (00 \mid 10 \mid 11)$

Ans.to Q No-2

Let us define some classes first :-

$$L = [a-z]$$

$$D = [0-9]$$

and we know, in regex,

$\backslash s$ = whitespace character.

Now, for our convenience and to make the final regex short, we will construct the regex for variable names only,

$$\therefore V = (L | \$ | _)(L | D | _)^4$$

∴ Final regex

$$= (\text{var})? \backslash s^* (V) (\backslash s^*, \backslash s^* V)^* \backslash s^* : \backslash s^* \\ (\text{integer} | \text{Boolean} | \text{real} | \text{char}) \backslash s^* ;$$