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Q1) a)  $0 + 1 + (11)^*0$ ?

Ans: 010

b)  $[0-9]^+ ((Ele)(\backslash + \backslash \backslash -)? [0-9]^+ )?$

Ans: 12e+63

c)  $([a...z]([a...z]|[0..9]))^*$

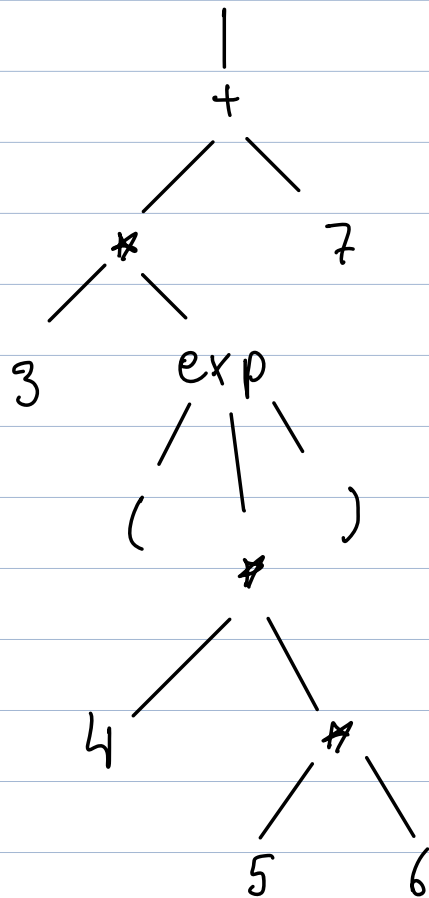
Ans: yyy

Q2) Reg Ex of letters, digits & '\_' & starts with letter or '\_'

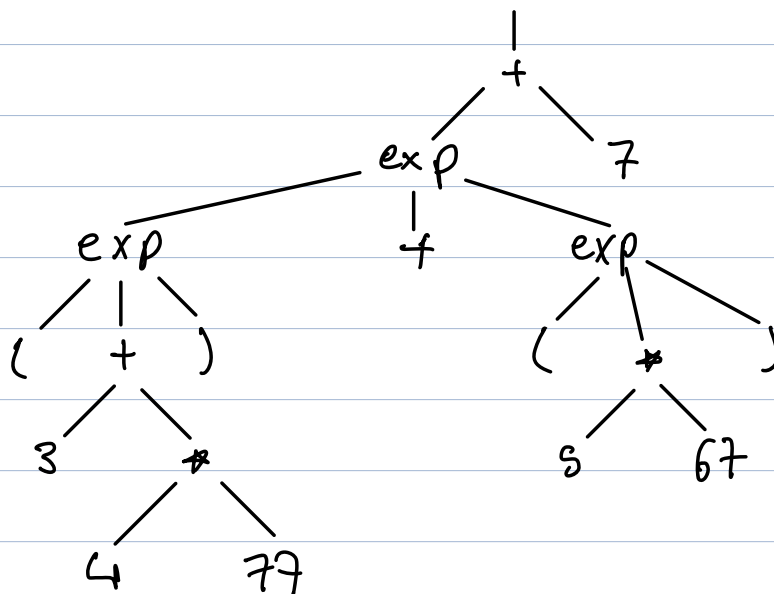
Ans:  $([a...z][A...Z]|\_)\left([a...z][A...Z][0-9]|\_ \right)^*$

Q3) cpp file & screenshot attached in submission

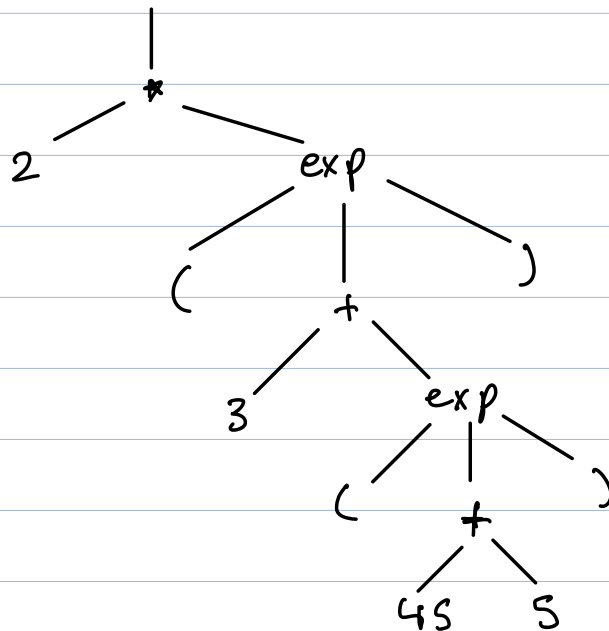
Q4) a)  $3 * (4 * 5 * 6) + 7$



b)  $(3 + 4 * 77) + (5 * 67) + 7$



c)  $2 * (3 + (4S + S))$



Q5) Grammar:

$$E \rightarrow T \{+T\}$$

$$T \rightarrow F \{ * F \}$$

$$F \rightarrow \text{num} | \text{id}$$

Top down parser

