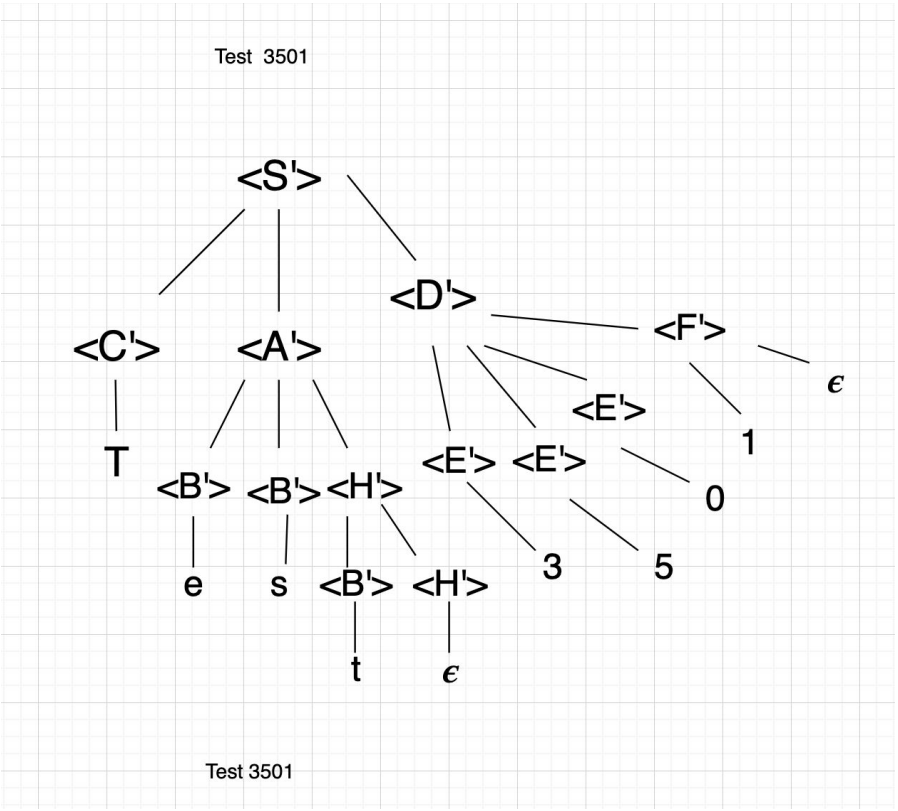
1.

a) Grammar

<S’> → <C’> <A’> <D’>
<C’> → A|B|C|D|E|F…. X|Y|Z
<A’> → <B’><B’> <H’>
<H’> → <B’> <H’> | ϵ
<B’> → a|b|c|d|e|f|g|...x|y|z
<D’> → <E’><E’><E’><F’>
<F’> → <E’><F’>|ϵ
<E’> → o|1|2|3|4|5|6|7|8|9

Terminals = { A,B,C,...X,Y,Z,a,b,c,...x,y,z,0,1,2,...9}
Variables = {S’,C’,A’,H’,B’,D’,E’,F’}

b)



2.

< assign> → <var> = <exp>
<var> type = int : <expr> type = int
<var> type = float : <expr> type= int /float