

CFG\_Example.cpp output:

```
hyuse@Hyuse:~/Desktop/Automata/Automata Simulations$ make run_cfg<test_input.txt
./Context-Free\ Grammar/CFG_Example
=====
  CFG PARSER: Tuples, Lists & Strings
=====

FORMAL GRAMMAR DEFINITION G = (V, Sigma, R, S):
  V (Variables): { S, E, L, Q }
  Sigma (Terminals): { a-z, 0-9, " ", ( ), [ ], { }, ., }
  R (Production Rules):
    1. S -> E S | epsilon
    2. E -> char | Q | ( L )
    3. Q -> " Content "
    4. L -> E , L | E

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INSTRUCTIONS:
- Enter strings to test.
- Valid: ("hello", b, [c])
- Invalid: ("hello, b) (Missing quote)
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How many test cases?
Input: a
Result: [ ACCEPTED ]

Input: "hello"
Result: [ ACCEPTED ]

Input: print("Hello World!")
Result: [ ACCEPTED ]

Input: ()
Result: [ ACCEPTED ]

Input: (a)
Result: [ ACCEPTED ]

Input: (a,b)
Result: [ ACCEPTED ]

Input: [a, "b", (c)]
Result: [ ACCEPTED ]

Input: a b "c"
Result: [ ACCEPTED ]

Input: ((a))
Result: [ ACCEPTED ]

Input: (a, (b, c), [d])
Result: [ ACCEPTED ]

Input: (
Result: [ REJECTED ]

Input: (a, (b, c), [d])
Result: [ ACCEPTED ]

Input: (
Result: [ REJECTED ]

Input: print("Hello World!"
Result: [ REJECTED ]

Input: (a,
Result: [ REJECTED ]

Input: (a b)
Result: [ REJECTED ]

Input: "hello
Result: [ REJECTED ]

Input: [a)
Result: [ REJECTED ]

Input: a, b
Result: [ REJECTED ]

Input: (a,,b)
Result: [ REJECTED ]

Input:
Result: [ ACCEPTED ]
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```