What is an interpreter?

A translator the processes and executes the source program without first converting it to machine language

What is a compiler?

A translator that converts the source program into machine language

What’s the difference between an interpreter and a compiler?

An interpreter executes the code without converting it into machine language while a compiler converts the source code into machine language

What is a token?

An object that has a type and a value (i.e. “3” is INTEGER with a value of 3)

What is the name of the process that breaks input apart into tokens?

Lexical analysis

What is the part of the interpreter that does lexical analysis called?

A Lexer

What are the other common names for that part of an interpreter or a compiler?

Scanner or tokenizer

What is a lexeme?

A sequence of characters that form a token

What is the name of the process that finds the structure in the stream of tokens, or put differently, what is the name of the process that recognizes a certain phrase in that stream of tokens?

Parsing

What is the name of the part of the interpreter (compiler) that does parsing?

Parser

What is a context-free grammar (grammar)?

Notation used for specifying the syntax of a programming language

How many rules / productions does the grammar have?

Two lines

What is a terminal? (Identify all terminals in the picture)

Terminal is an input for the user

Ex. “expr” “factor”

What is a non-terminal? (Identify all non-terminals in the picture)

Non-terminal is anything that is not an input from the user

Ex. “Mul | DIV” “INTEGER”

What is a head of a rule? (Identify all heads / left-hand sides in the picture)

left hand side of the colon

Ex. “expr” “factor

What is a body of the rule? (Identify all bodies / right-hand sides in the picture)

Right hand side of the colon

Ex. “Factor ((MUL | DIV) factor) \*” “INTEGER”

What is the start symbol of a grammar?

Non-terminal symbol on the left-hand side of the first rule

Ex. “expr”