EXAM: CR-PE01

TO-DO:

Our client is working on a project. his project is to create a programming language from scratch for his students.

Build a compiler application that can detect s simple lexical analyses and brief syntax analyses for our little language for our client.

COMPILER RULES LEXICAL

- detect (integer, float, chars, boolean, long) as primitive data type
- detect (String, Array ,Symbol ,Object ,Heap ,Tree) as structured data type
- detect (identifiers, all requirement are applied (can't have space, can't start with a number ....))
- detect (operators, ||, && , + , * , = , - , % , ** , ! , / , and comparison operators loose and strict
- detect reserved keywords:
  - if , else , break , switch , skip , and , or , in , next , for , while , do , until , default , goto

COMPILER RULES SYNTAX

- detect a so simple variable declaration [eg: integer number;] ✔
- detect so simple variable definition [eg: integer number = 20;] ✔
- detect so simple if statement condition [eg: if(true){codesomething}] ✔
- otherwise it flags an error

SYNTAX RULES DOESN'T CONTAIN SYMANTIC ON TOKENS

this means that our compiler is able only to recognize the syntax of a written statement but doesn't recognize any other things about tokens.

in the real compiler: the compiler verifies the syntax of a written statement and the semantics of each token for example this will flag an error for the c compiler:

int number = "something but not a number";
even if the statement is correct: <data type> <id> <=> <value> <;>
the semantics of tokens are not because a number cannot hold a string

in our case, this is fine because we test only this:
everything in dark blue is optional can appears and cannot.

declaration: <data type> <identifier><;>
definition : <data type> <identifier> <=> <value> <;>
condition :   <if><(condition)><{....}><else><{.....}>

WORK BASED ON:

- HTML
  - HTML basics, HTML Semantics, HTML elements attribute, HTML grouping elements spans, divs, HTML buttons .....
- CSS
  - fonts, text attributes, colors, and background-colors ....
- JAVASCRIPT
  - All what's being covered so far, and i mean it

FINAL NOTE: 250 pts

⚠️ **noting based on:**

- HTML 20%
- CSS 20%
- JAVASCRIPT 60%

MADE BY : MOHAMMED TAHER AMINE SAHRAOUI