Racecode Custom Language Compiler

F1 Themed Language

Keywords

- **lightsout:** Marks the start of the program

- **chequered:** Marks the end of the program

- **pitstop:** Declares a variable

- **boost:** Addition operator (+)

- **brake:** Subtraction operator (-)

- **turbo:** Multiplication operator (*)

- **slipstream:** Division operator (/)

- **telemetry:** Prints a variable or expression

- **sector:** Begins an if statement

- **then:** Separates condition from the then-block

- **else:** Introduces an optional else-block

- **endsector:** Ends an if statement

Identifiers and Numbers

- ID: Alphanumeric identifier (e.g., speed, lap1) starting with a letter

- NUMBER: Integer values (e.g., 42, 100)

Comparison Operators

- = : Assignment

- == : Equal to

- != : Not equal to

- < : Less than

- > : Greater than

- <= : Less than or equal to

- >= : Greater than or equal to

Ignored Characters

- Whitespace (spaces, tabs, newlines) is ignored.

Syntax Rules

Program Structure

Every RaceCode program must:

- Begin with lightsout

- End with chequered

Example

lightsout

Program

Chequered

Statements

Statements can be one of the following:

Variable Declaration

- Syntax: pitstop ID

- Declares a variable without initialization.

- **Example:** pitstop speed

Assignment

- Syntax: ID = expression

- Assigns the result of an expression to a variable.

- **Example:** speed = 10 boost 5

Output

- Syntax: telemetry ID or telemetry expression

- Prints the value of a variable or the result of an expression.

- **Examples:**

    o telemetry speed

    o telemetry 20 turbo 3