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CMPSC 470 Sections 001, 001, 002, 001 [in order of names]

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**Car Interpreter Language (CIL) - Language Reference Manual**

Language Keywords

1. Control Keywords

* drive();: Initiates the car to drive forward.
* stop();: Commands the car to stop.
* reverse();: Instructs the car to reverse its direction.
* horn();: Activates the car's horn.

2. Sensor Keywords

* read\_sensor();: Reads the sensor to detect obstacles.

3. Conditional Keywords

* if (condition) { ... }: Executes the code block inside the curly braces if the condition is true.
* else { ... }: Executes the code block inside the curly braces if the preceding if condition is false.

4. Loop Keywords

* while (condition) { ... }: Loops through the code block inside the curly braces as long as the condition is true.

5. Variable Assignment and Arithmetic

* variable = value;: Assigns a value to a variable.
* Arithmetic Operations: Supports basic arithmetic operations such as addition (+), subtraction (-), multiplication (\*), and division (/).

6. Input and Output

* console.log("message");: Outputs a message to the console.

Syntax examples

Control Keywords

* drive();
* stop();
* reverse();
* horn();

Conditional Statement

if (read\_sensor() === "obstacle") {

drive();

} else {

stop();

}

Loop Statement

let count = 0;

while (count < 5) {

horn();

count = count + 1;

}

Variable Assignment and Arithmetic

let speed = 50;

let acceleration = 10;

let distance = speed \* acceleration;

Input and Output

console.log("Car is starting.");

let userInput = read\_sensor();

console.log(`User input: ${userInput}`);

Complete Example

drive();

let distance = 100;

if (distance > 50) {

reverse();

} else {

stop();

}

How to Use Keywords Syntactically

Keyword Placement: Keywords like if, else, and while are followed by parentheses containing the condition. Code blocks associated with these keywords are enclosed in curly braces {}.

Function Calls: Functions like drive(), stop(), reverse(), and horn() end with parentheses () to indicate a function call.

Variable Assignment: Use the format variable = value; for variable assignment and basic arithmetic operations.

Input and Output: Utilize console.log("message"); for outputting messages to the console.