<Start> ::= Start <variables><statements>

<variables> ::= (<variable>)\*

<variable> ::= [a..z] +

<action-stat> ::= <go-forwards-stat> | <turn-stat>

<go-forwards-stat> := drive forwards speed % <num-expression>
<turn-stat> := turn <direction> speed % <num-expression>

<control-stat> := <if-stat> | <repeat-stat>

<if-stat> ::= if <logic-expression> do <statements> <else-stat>

<else-stat> ::= else <statements> | ε

<repeat-stat> := repeat indefinitely do <statements>

<num-expression> ::= <num-value> <num-operator> <num-value>

<num-operator> ::= add | min | times | div | pow |

<num-value> ::= integer | <sensor-data> | <variable>

## <logic-expression> ::= <logic-value> <bool-operator> <logic-value>

## <bool-operator> ::= and | or

<num-logic-exp> ::= <num-value> <num-comparison> <num-value> <num-comparison> ::= equals | not equals | less than | leq | more than | meq

## <logic-value> ::= <sensor-data>| <variable> | true | false

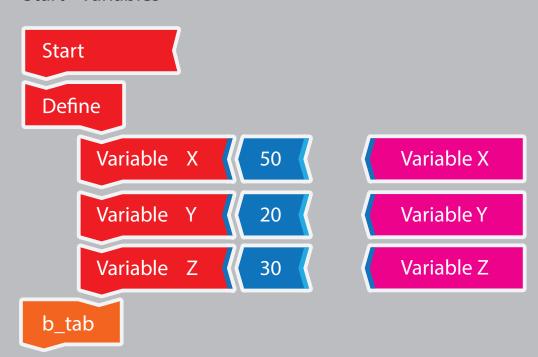
<num-sensor-data> ::= <get-ultrasonic>

<get-ultrasonic> := get distance cm ultrasonic sensor

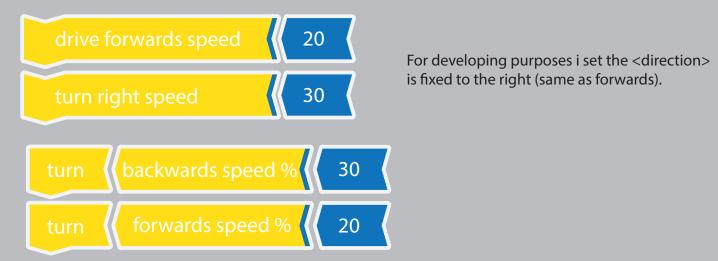
# Helper blocks



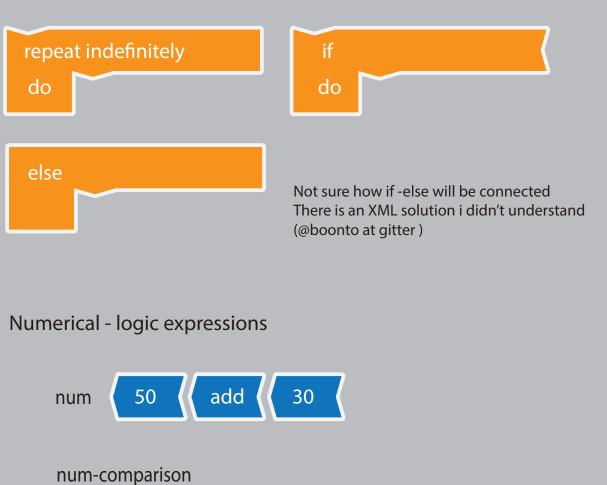
#### Start - Variables



#### Direction



### Control blocks



not equals

for Tesseract reasons. i use the above blocks over this

> get distance US sensor equals

## **Complex Example**

