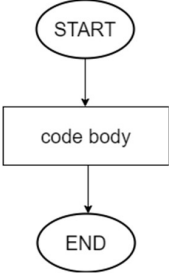


Pseudocode Cheat Sheet

VERB	Definition
START/END	Begin / finish code
SET	Set a variable
INPUT / DISPLAY	Obtain / Provide user data
GET / PUT	Obtain data from a sensor. Or Provide data to an actuator
CALCULATE, COMPARE	Compute
INCREMENT / DECREMENT	Add / Subtract one
CALL	Run function / subroutine

Symbol	Definition	Examples
=	assign	i = 5
==	is equal to	x == 5, x == z IF x == 4
>	is greater than	x > 5 IF x > 4 then
>=	is greater than or equal to	x >= 6 LOOP WHILE x >= 6
<	is less than	value[y] < 7 LOOP UNTIL value[Y] < 7
<=	is less than or equal to	value[] <= 12 IF value[Y] <= 12 THEN
≠	not equal to	x ≠ 4, x ≠ x
AND	logical AND	a AND b IF x < 7 AND y > 2 THEN
OR	logical OR	a OR b IF x < 7 OR y > 2 THEN
NOT	logical NOT	NOT a IF NOT x = 7 THEN
mod	modulo	19 mod 6 = 1 IF value[y] mod 7 = 0 THEN
div	integer part of quotient	24 div 7 = 3 IF value[y] div 7 = 2 THEN

Operation	Flowchart example	Pseudocode example
sequential operations	 <pre> graph TD START([START]) --> Body[code body] Body --> END([END]) </pre>	START perform task1 perform task2 END



conditional operations	<pre> graph TD START([START]) --> SET[SET x = 3;] SET --> IF{IF (x > 0)} IF -- true --> CB1[code body] IF -- false --> CB2[ELSE code body] CB1 --> END([END]) CB2 --> END </pre>	START SET x = 3 IF x > 0 THEN DISPLAY "X is greater than zero" ELSE DISPLAY "X is not greater than zero" END IF END
while-loop	<pre> graph TD START([START]) --> SET[SET i = 0] SET --> WHILE{WHILE (i < 5)} WHILE -- true --> CB[code body INCREMENT i;] CB --> WHILE WHILE -- false --> END([END]) </pre>	START LOOP WHILE i < 15 DISPLAY "i is less than 15" INCREMENT i END LOOP END
do-while-loop	<pre> graph TD START([START]) --> SET[SET i = 0] SET --> DO[DO] DO --> CB[code body INCREMENT i] CB --> WHILE{WHILE (i < 5)} WHILE -- true --> DO WHILE -- false --> END([END]) </pre>	START LOOP DO DISPLAY "i is less than 15" INCREMENT i WHILE i < 15 END LOOP END
for-loop	<pre> graph TD START([START]) --> FOR{FOR (SET i=0; i < 5; INCREMENT i;)} FOR -- true --> CB[code body] CB --> FOR FOR -- false --> END([END]) </pre>	START LOOP COUNT from 0 to 5 DISPLAY "Counting 1 to 5" INCREMENT COUNT END LOOP END
foreach-loop	<pre> graph TD START([START]) --> SET[SET[] x = 1, 2, 3;] SET --> FOREACH{FOREACH (x)} FOREACH -- true --> CB[code body] CB --> FOREACH FOREACH -- false --> END([END]) </pre>	START SET[] x = 1, 2, 3 LOOP EACH x DISPLAY "Counting out x" END LOOP END

Arduino Pseudocode Examples

Simple Blink Pseudocode

```
START
SET LED = 13
WHILE (Power On)
    PUT 13 on
    WAIT 2 seconds
    PUT 12 off
    WAIT 2 seconds
END
```

Simple LED Connected to a digital light sensor

```
START
SET LED = 13
SET LightSensor = 2
WHILE (Power On)
    GET LightSensor
    IF (LightSensor == 1)
        LED on
    Else
        LED off
END
```

