**Pseudocode Cheat Sheet**

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| **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 |

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| **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 |

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| **Operation** | **Flowchart example** | **Pseudocode example** |
| sequential operations | Diagram  Description automatically generated | START  perform task1  perform task2  END |
| conditional operations | Diagram  Description automatically generated | 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 |  | START  LOOP WHILE i < 15  DISPLAY “i is less than 15”  INCREMENT i  END LOOP  END |
| do-while-loop | Diagram  Description automatically generated | START  LOOP DO  DISPLAY “i is less than 15”  INCREMENT i  WHILE i < 15  END LOOP  END |
| for-loop | Diagram  Description automatically generated | START  LOOP COUNT from 0 to 5  DISPLAY “Counting 1 to 5”  INCREMENT COUNT  END LOOP  END |
| foreach-loop | Diagram  Description automatically generated | 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 LightSenor = 2

WHILE (Power On)

GET LightSensor

IF (LightSensor == 1)

LED on

Else

LED off

END