Cheatography

Arduino Cheat Sheet

by Knoddy via cheatography.com/147755/cs/32140/

Variables

Strings	`String variab leName = "Text Here" ;`
Integers	`int variab leName = 0;`
Doubles	`double variab leName = 0.1;`
Longs	`long variab leName = 999999999;`
Booleans	`boolean variab leName = false;`

You can also create empty variables by default by omitting the equals sign. For example, `String variab leName;` will create a new empty String variable.

Arrays

Array that can hold 4 Strings	`string[4] array;`
Array with pre-set content	`string[3] array = {"Ba nan a", "Ap pl e"}`
Access the n[th] value of an array	`array[ n-1];`
Assign a value to an array	`array[n-1] = " Pea r";`

Changing Values

Create a new String variable	`String variab leName;`
Assign "-Pear" to the variable	`variab leName = " Pea r";`

This method works for other variable types, too. Keep in mind of the data type that you are assigning to a variable, though. You cannot assign `" Pea r"` to an `int`, for example.

While Loops

Functions

Declare a function	`void myFunc() { // code here }`
Declare a function that returns an `int`	`int myFunc(){ return 1; }`
Declare a function that takes a String parameter	`void myFunc (String param) { // code here }`
Store the return value of a function in a variable	`int variab leName = myFunc() ;`

Combine these concepts to create different types of functions that suit your needs. You can have a function that returns an `int` value with a `String` parameter, for example. Use `void` if your function doesn't return anything.

Arduino

Set digital pin `n` to INPUT.	`pinMode(n, INPUT);`
Set digital pin `n` to OUTPUT.	`pinMode(n, OUTPUT);`
Read digital pin `n` (returns boolean)	`digita lRe ad(n);`
Write to digital pin `n` (LOW or HIGH)	`digita lWr ite(n, LOW );`
Read value of analog pin A0 (returns int)	`analog Rea d(A0);`

Motor

Encoder

Create a new encoder plugged in pins 2 and 3	`Encoder myEnco der(2, 3) ;`
Read encoder (returns long)	`Encode r.r ead();`
Write to encoder	`Encode r.w rit e(0);`

While loops will repeatedly run the code inside it until the `condition` is `false`, in which the loop will stop and the code after it will continue.

```
while (condi tion) {
    // code here
}
```

Create a new motor plugged into port M1	`Adafru it_ DCMotor *myMotor = AFMS.g etM oto - r(1);`
Set speed of a motor (0-255)	`motor- >se tSp eed (100);`
Change motor direction (FORWARD, BACKWARD, RELEASE)	`motor- >ru n(F ORW ARD);`

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