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Thread: [Make my own library in arduino IDE](#)

UZHA - March 1, 2016, 1:11 pm

I want to make my code more elegant to get ekstra points from my teacher. So my plan is to use a seperet file for all my functions that I will need to use throughout the program. We are making an arduino which can calculate your BPM of your heart. So I have so far made one function and it's job is to get average of a list. here is my code!:

Code #include "Helper.cs"

```
int measurment[10];
int measur = 0;
int reading = 0;
int counter = 0;
```

```
void setup() {
  Serial.begin(9600);
```

```
}
```

```
void loop() {
  while(counter < 10) { // we will get readings from the analogreader and we want to do that 10 times
    and then start calulating.
    reading = analogRead(0);
    measurment[counter] = reading;
    counter++;
```

```
  }
  getAverage(measurment[10]); // using average to get to know if this will work or not!
```

```
}
```

Now that is so far my main code. This function is made in notepad++ and I want to use it as a library for my code:

Code #ifndef Helper.cs

#define Helper.cs

#include "Arduino.h"

```
public int getAverage(int list) {
  int counter = 0;
  int sum = 0;
  for(int counter;counter < 10;counter++){
    sum += list[counter];
  }
  return sum;
}
```

#endif

Now will this work or do I need to make the library inside the arduino IDE?

Do I need to make classes for a library to work or is this fine?

Note: I'm just a beginner at coding and please tell me if there is anything wrong with the code.

Goodies - March 1, 2016, 1:29 pm

Where do I begin.

PHP Code

```
<?php
public int getAverage(int list) {
    int counter = 0;
    int sum = 0;
    for(int counter; counter < 10; counter++){
        sum += list[counter];
    }
    return sum;
}
```

This won't work. list is an integer, not an array.

counter in the for loop is re-declared but uninitialized. It should be initialized to 0, and really, it should be declared outside the loop depending on the language.

PHP Code

```
<?php
int counter;
for(counter = 0; counter < 10; counter++){
    // code here
}
```

If you are passing an array, you want to pass the size as well. Also, because the name of the function is 'getAverage', I assume you want the average.

PHP Code

```
<?php
public int getAverage(int *list, int size) {
    int counter;
    int sum = 0;
    for(counter = 0; counter < size; counter++){
        sum += list[counter];
    }
    return sum/size;
}
```

Call it with:

PHP Code

```
<?php
void loop() {
    measurement[10];
    int counter;
    for(counter = 0; counter < 10; ++counter){
```

```
    reading = analogRead(0);  
    measurment[counter] = reading;  
}  
int avg = getAverage(measurment, 10);  
}
```

webdev77 - March 2, 2016, 10:09 am

Just a thought as well, rename your files to the appropriate file extensions. Arduinos do not support C#. While technically it doesn't matter since it is just text files you are working with, I'd recommend making them header files or C source files.

UZHA - March 2, 2016, 10:40 am

So Goodie,

if I then make this a PHP file then call `#include"library_getAverage"(<- just random name)`, I will be able to use it in my program?

Then after that I can just keep on adding functions as I go on coding for the arduino project?