How To Thread

Why Thread

➔ Threading is doing more than one thing at once. It allows you to do things like opening a claw and driving at the same time. Whereas if you didn't use threading you'd have to stop, open the claw, stop, and then drive.

First you need to include threading.h

- The lines of code you'll need to thread are in a different library and to access them you need to include the library that stores it.

It should look something like this …

```
#include <kipr/wombat.h>
#include <threading.h>
```

There are four main lines of code that you will need in order to thread. These lines of code are:

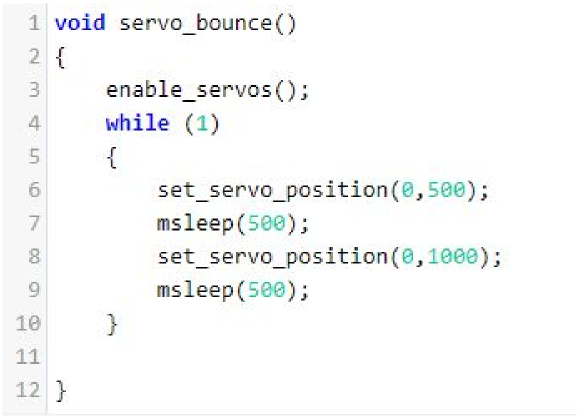
- thread example;
- example = thread_create(function);
- thread_ destroy(example);

Where there is the word "example" in the lines of code above, is the name of the thread you will create. For instance, if you created a thread that moves a servo and drives at the same time, the servo moving up and down looks like a wave. So, let's name this thread "wave". It will look something like this:

- thread wave;
- wave = thread_create(function);
- thread_destroy(wave);

Right now we are coding in main.c but we need to create a function so let's add a function in include files. First you'll need to add a file in the "include files" section. Let's name this file the same name we are going to call our function. For this example we're going to call the file 'servo_bounce'. Once you name the file it will look like this:

- servo_bounce.h



```
void servo_bounce()
{
    enable_servos();
    while (1)
    {
        set_servo_position(0,500);
        msleep(500);
        set_servo_position(0,1000);
        msleep(500);
    }

}
```

Once you have your file named go ahead and create your function. "Servo_bounce" is the name of our function just like "wave" is the name of our thread. Remember this can be named anything you'd like. Compile and return back to your main.c file.

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Now let’s put it all together. We have a name for our thread, a name for our function, and we can now combine everything we have learned. When we put it all together it will look something like this:

```
#include <kipr/wombat.h>
#include <threading.h>

thread wave;
Int main();
{
     printf(“Hello World\n”);

     wave = thread_create(servo_bounce);
     thread_start(wave);

     mav(0,500);
     mav(3,500);
     msleep(5000);

    thread_destroy(wave);
    return 0;
}
```