

Slowing a Servo Down

Slowing a Servo Down

Slide Topic

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Variables (Quick Recap)

You can set the value of an int variable to any integer you choose and change it when you need in the code.

Note that a single equal sign (=) means *is assigned* (sometimes it is called the “assignment operator”).

```
int counter;
```

counter

3



“visualize”
the variable
storage
spaces

So `counter = 3;` means “counter is assigned 3”.

Move the Servo Arm Using a Loop

Description: Write a program for the KIPR Robotics Controller that moves the DemoBot servo arm from position 200 to 1800 in increments of 100.

Remember to **enable the servos** at the beginning of your program, and **disable the servos** at the end of your program!

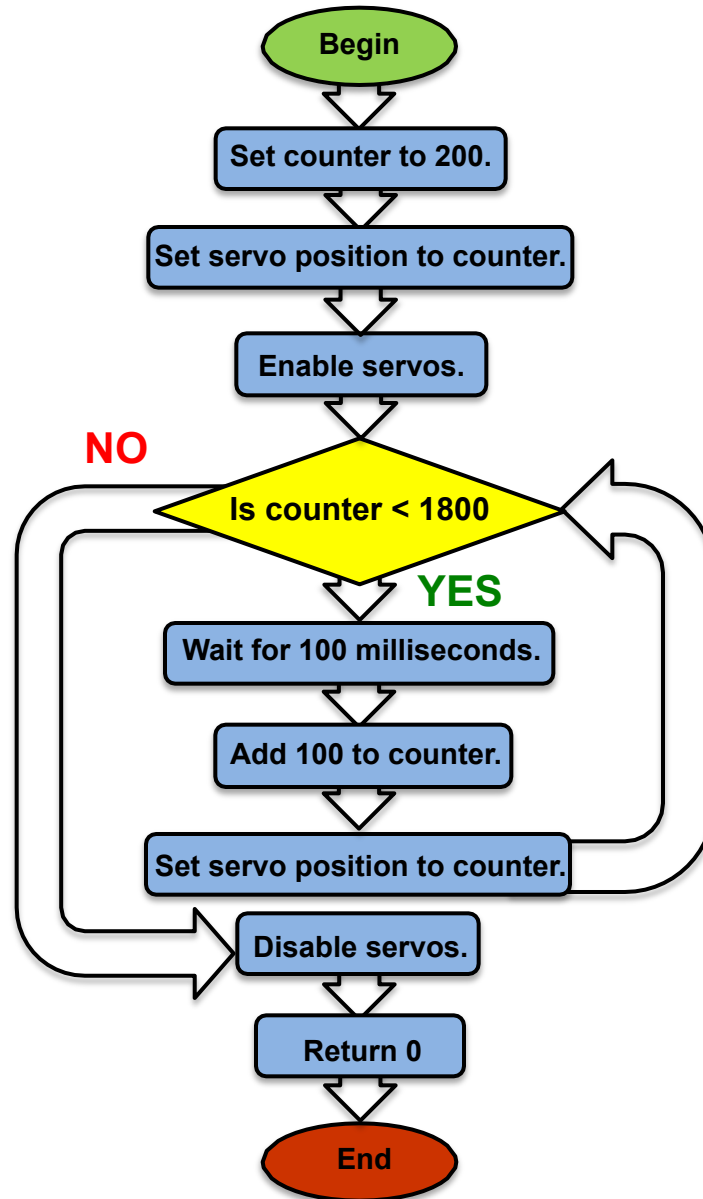
Analysis: What is the program supposed to do?

Pseudocode:

1. Set counter to 200.
2. Set servo position to counter.
3. Enable servos.
4. *Loop:* Is counter < 1800?
 Wait for 0.1 seconds.
 Add 100 to counter.
 Set servo position to counter.
5. Disable servos.
6. End the program.

Move the Servo Arm Using a Loop

Analysis: Flowchart



Move the Servo Arm Using a Loop

Solution:

Pseudocode

1. Set counter to 200.
2. Set servo position to counter.
3. Enable servos.
4. *Loop:* Is counter < 1800?
 Wait for 0.1 seconds.
 Add 100 to counter.
 Set servo position to counter.
5. Disable servos.
6. End the program.

Source Code

```
1  #include <kipr/wombat.h>
2
3  int main()
4  {
5      int counter = 200;
6      set_servo_position(0, counter);
7      enable_servos();
8      while(counter < 1800)
9      {
10         msleep(100);
11         counter = counter + 100;
12         set_servo_position(0, counter);
13     }
14     msleep(100);
15     disable_servos();
16     return 0;
17 }
18
```