Functions with Arguments

Slide	Topic

Custom Functions (Quick Recap)

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When you call this function, how long will it run for?

Source Code

```
1  #include <kipr/wombat.h>
2
3  void drive_forward(); // function prototype
4
5  int main()
6  {
7      drive_forward(); // function call
8      return 0;
9  }
10
11 void drive_forward() // function definition
12 {
13     motor(0, 80);
14     motor(3, 80);
15     msleep(4000);
16     ao();
17 }
```

Now, what if you don't want it to run for this long each time?

Functions with Arguments

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Source Code

```
1  #include <kipr/wombat.h>
2
3  void drive_forward(int milliseconds); // function prototype
4
5  int main()
6  {
7      drive_forward(4000); // function call
8      return 0;
9  } // end main
10
11 void drive_forward(int milliseconds) // function definition
12 {
13     motor(0, 80);
14     motor(3, 80);
15     msleep(milliseconds);
16     ao();
17 }
```

- **Function arguments:** values you will set when you call the function

Writing Custom Functions with Arguments

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Source Code

```
1  #include <kipr/wombat.h>
2
3  void drive_forward(int milliseconds); // function prototype
4
5  int main()
6  {
7      drive_forward(4000); // function call
8      return 0;
9  } // end main
10
11 void drive_forward(int milliseconds) // function definition
12 {
13     motor(0, 80);
14     motor(3, 80);
15     msleep(milliseconds);
16     ao();
17 }
18
19
```

The value in the function call ***sets*** the value of the argument…

… which is then used in the function definition.

Writing Your Own Functions with Multiple Arguments

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Source Code

```
1  #include <kipr/wombat.h>
2
3  void drive_forward(int power, int milliseconds); // function prototype
4
5  int main()
6  {
7      drive_forward(80, 4000); // function call
8      return 0;
9  } // end main
10
11 void drive_forward(int power, int milliseconds) // function definition
12 {
13     motor(0, power);
14     motor(3, power);
15     msleep(milliseconds);
16     ao();
17 }
18
19
```

The value in the function call ***sets*** the value of the argument…

… which is then used in the function definition.

Arguments That Change Over Time

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Source Code

```
1  #include <kipr/wombat.h>
2
3  void drive_forward(int power, int milliseconds); // function prototype
4
5  int main()
6  {
7      drive_forward(80, 4000); // function call
8      drive_forward(75, 2000);
9      return 0;
10 } // end main
11
12 void drive_forward(int power, int milliseconds) // function definition
13 {
14     motor(0, power);
15     motor(3, power);
16     msleep(milliseconds);
17     ao();
18 }
19
```

The values in the SECOND function call ***are now 75 and 2000*** respectively

… which is then used in the function definition.