

Create leg object:

```
struct leg leg1; legInit(&leg1, 0, 1, 1, LEG1, SLAVE_ADDRESS);
```

Method for setting position of leg

```
void setPosition(struct leg *self, double cartesianPosition[3])
```

Call this method to specify the position of a leg

Method for setting position of all Legs

```
void setAllPosition(double cartesianPosition[3]);
```

Call this method to specify the position of all leg objects. Helpful for writing the same coordinates to all legs.

Method for updating servo positions

```
void updatePositon();
```

Call this method to move servo positions after calling **setPosition** or **setAllPosition**

Example Implementation:

```
// Initialize PCA9685 Servo control module
PCA9685Init(SLAVE_ADDRESS);

// initializing leg modules
struct leg leg1; legInit(&leg1, 0, 1, 1, LEG1, SLAVE_ADDRESS);
struct leg leg2; legInit(&leg2, 0, 1, 1, LEG2, SLAVE_ADDRESS);
struct leg leg3; legInit(&leg3, 0, 1, 1, LEG3, SLAVE_ADDRESS);
struct leg leg4; legInit(&leg4, 0, 1, 1, LEG4, SLAVE_ADDRESS + 1);
struct leg leg5; legInit(&leg5, 0, 1, 1, LEG5, SLAVE_ADDRESS + 1);
struct leg leg6; legInit(&leg6, 0, 1, 1, LEG6, SLAVE_ADDRESS + 1);

double position[3] = {2, 0, 0}; // extends al legs out
double position2[3] = {0.1736, 0, 0.0152};
double position3[3] = {1.4142, 0, -1.4142};

while(1)
{
    // calculates position of legs and updates position parameters
    setPosition(&leg1, position);
    setPosition(&leg2, position2);

    // moves servos to current position of object
    updatePositon();

    // blinks to indicate operation
    ledBlink();
}
}
```