

# Object Oriented (OOP) Programming Overview

- Software “**objects**” are called “**classes**.”
- They have data (“**variables**”) and functions (“**methods**”)
- The class is like an abstract template. To make use of a class, a specific **instance** of the class must be created with a special function called a “**constructor**”
- The objects variables and methods are accessed using *dot syntax* which is the object name followed by a dot and variable/method name. (example: `car.drive();` )

```
class Car {  
  color c;  
  float xpos;  
  float ypos;  
  float xspeed;  
  
  // The Constructor is defined with arguments.  
  Car(color tempC, float tempXpos, float tempYpos, float tempXspeed) {  
    c = tempC;  
    xpos = tempXpos;  
    ypos = tempYpos;  
    xspeed = tempXspeed;  
  }  
  
  void display() {  
    strokeWeight(3);  
    stroke(0);  
    fill(c);  
    rectMode(CENTER);  
    rect(xpos,ypos,20,10);  
  }  
  
  void drive() {  
    xpos = xpos + xspeed;  
    if (xpos > width) {  
      xpos = 0;  
    }  
  }  
}
```

*variables (data)*

*constructor method*

*methods (functions)*