Lesson 4

* Objects in Programming
  + Classes
    - public class [class name]
    - A blueprint for an object; also contains the parts that go in an object and some tools for its construction
* Methods
  + Smaller mechanisms that work together to produce the desired output
  + Some programs only have 1 or 2 methods, while other more complex programs have thousands
  + Declare methods within classes with this:

accessType returnType methodName()

{

//statements go here

}

* Parameters
  + Enabling us to pass data into the method from the outside
  + Makes it possible to perform the same function over and over again

accessType returnType methodName(<parameters>)

{

//statements go here

}

* Instantiating an Object
  + In order to use a non-static method in a class, we must create or instantiate an object of that class into existence
  + ClassName objectName = new ClassName();
* Calling methods on an object
  + We can call the methods using dot notation

|  |  |
| --- | --- |
| static: | static is an additional modifier that allows a method to be run without instantiating an object. Since no objects exist in our program before it runs, The main() method must be static in order to act as  our entry point. |
| void: | This is the return type for the method. A return type can be set to a variety of data values. However the main method is always set to a return type of void. This means that the main() method does not return a value. |
| parameters: | String[]args is actually a placeholder for parameters or arguments. Although passing arguments into the main() method is beyond the scope of this course, we will discuss the meaning of String[]args in a later lesson. |