**What are classes?**

* A pattern or blueprint that describes the common characteristics of a category of objects
* Classes are simply **programmer-defined types**

**The class definition**

* Attributes
  + Object data
* Methods
  + Object actions

**Classes & object creation**

* When you **define a class**, you specify
  + The data attributes that hold its object’s state
  + The methods that define object behavior
* When you **create an object**
  + You create an **instance** of a class
    - These instances are called objects
    - This is also called **instantiation**
* You **send messages** to objects
  + Each message **invokes** a particular method

**What are objects?**

* **Components** used to build OO computer programs
  + User-defined variables used in OO programming
  + Represent visible objects, concepts, relationships
* All objects have three properties
  + **Identity:** who the object is
  + **State:** the objects characteristics
  + **Behavior:** what the object can do
* We’re going to take a look at these concepts using the C++ framework developed at CERN, called Root