

Standard Objects and Their Classes

```
public class ObjectName {
```

Instance Variables – *The variables that each “copy” of the object will have.*

```
    public int variableName;  
    public String anotherVariableName;  
    ...
```

Constructor Method(s) – *The methods that will build each copy of the object. There can be different methods that accept different parameters.*

```
    public ObjectName(){  
        assign Instance Variables values  
    }  
    public ObjectName(variableType parameterName){  
        Assign Instance Variables values  
    }  
    ...
```

Other Method(s) – *More methods that can access an object’s variables (accessor methods) and other methods that can change the state of an object’s variables (mutator methods).*

```
    public int accessorMethodName( ){  
        return variableData;  
    }  
    public void mutatorMethodName( ){  
        Change variableData;  
    }
```

```
}
```

Example: The Car Class (Car Objects)

```
public class Car {  
  
    public int year, speed;           //Instance Variables (Each instance has)  
    public String type;  
    public boolean running;  
  
    public Car(){                     //Default Constructor Method (Constructs Object)  
        year = 2017;                 //State Variables  
        speed = 0;  
        type = "Ferrari";  
        running = false;  
    }  
  
    public Car(int y,String t){       //Constructor Method (2 parameters)  
        year = y;                   //State Variables  
        type = t;  
        speed = 0;  
        running = false;  
    }  
  
    public void start(){              //Mutator Method (mutates/changes state)  
        running = true;  
    }  
  
    public void turnOff(){            //Mutator Method  
        running = false;  
    }  
  
    public void speedUp(){            //Mutator Method  
        speed++;  
    }  
  
    public void brake(){              //Mutator Method  
        speed-=2;  
        if(speed<0)  
            speed=0;  
    }  
  
    public int getSpeed(){            //Accessor Method (accesses state)  
        return speed;  
    }  
}
```