

# Classes

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# Outline

- What is a Class?
- What is an Object?
- Members
- Using Classes
- Methods
- Constructors
- Access Modifiers

# What is a Class?

- A way we classify things in Java



# Methods and Data

- A Class is a group of related methods and data
- A Class provides blueprints for creating an Object



# A Class is a Type

- A Class is a non-primitive type
- A way of extending the type system
- Everything in Java is made up of primitive types
  - Classes are groupings of those types
  - Plus methods to work with that data
- Herding complexity!



# What is an Object?

- **Simply put: an instance of a Class**
- **Purchase in a store**
  - Not candy (Class)
  - Not even a specific type of candy (Class)
  - A specific actual candy bar (Object)
- **A Class is a cookie cutter**
- **A cookie is an Object**



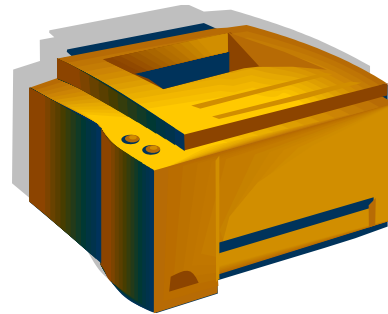
# Defining a Class

- **Classes have members**

- Data
- Method

- **Printer Example:**

- Data
  - Model Number
  - Manufacturer
  - Sheets of Paper Loaded
  - Color / Black and White
- Methods
  - Print
  - Turn On
  - Turn Off
  - Show Error



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