

Classes and Objects }

Advanced Multimedia Technologies

Classes and Objects

- { What are classes and objects?
- { Properties
- { Methods
- { Access Modifiers



What are classes
and objects?

What are Classes and Objects?

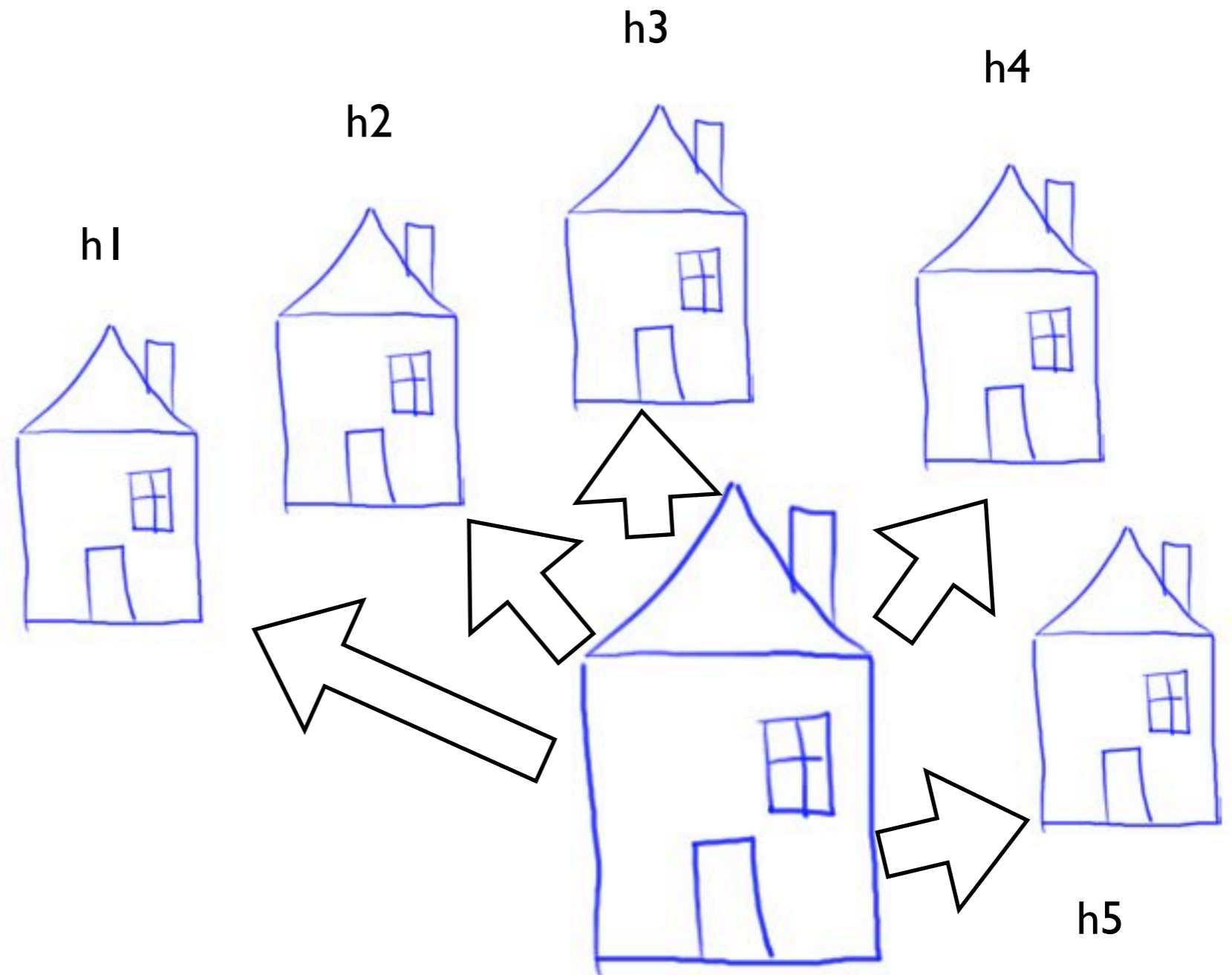
What are Classes and Objects?

- { Classes are **Blueprints** of code
- { Objects are **instances** of classes

Classes

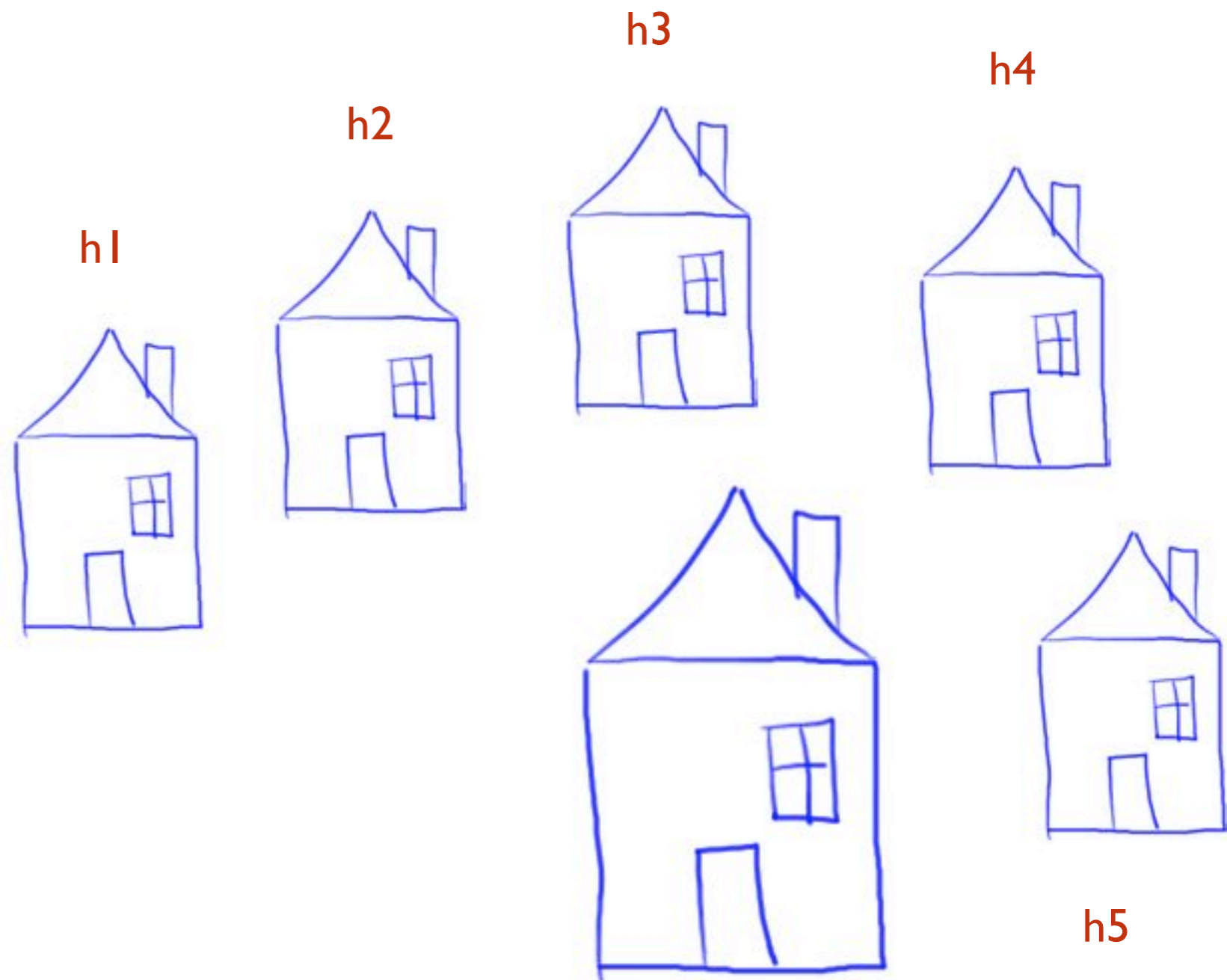


Class (blueprint) for a house
House



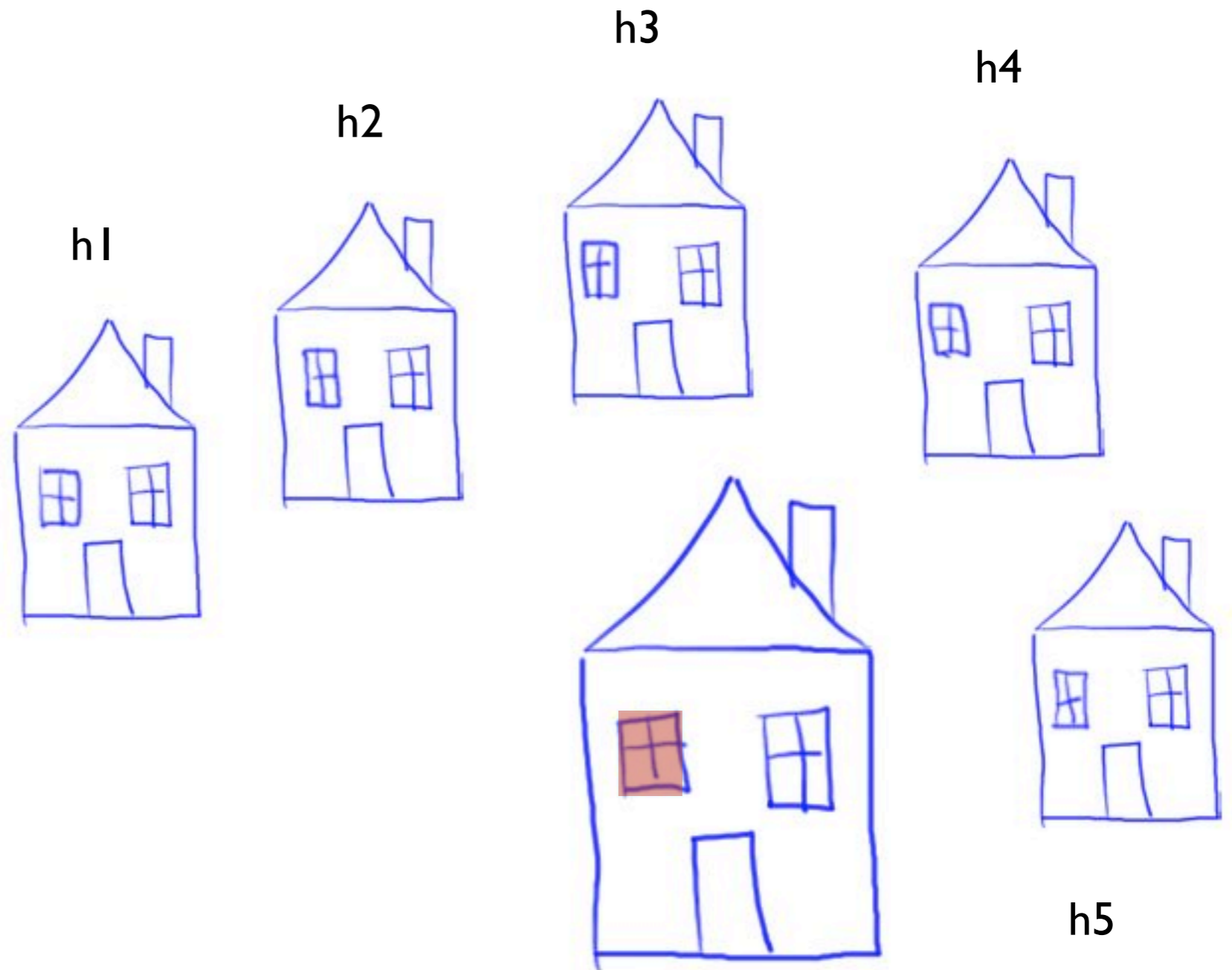
Copies or **INSTANCES**
of the House class.

House



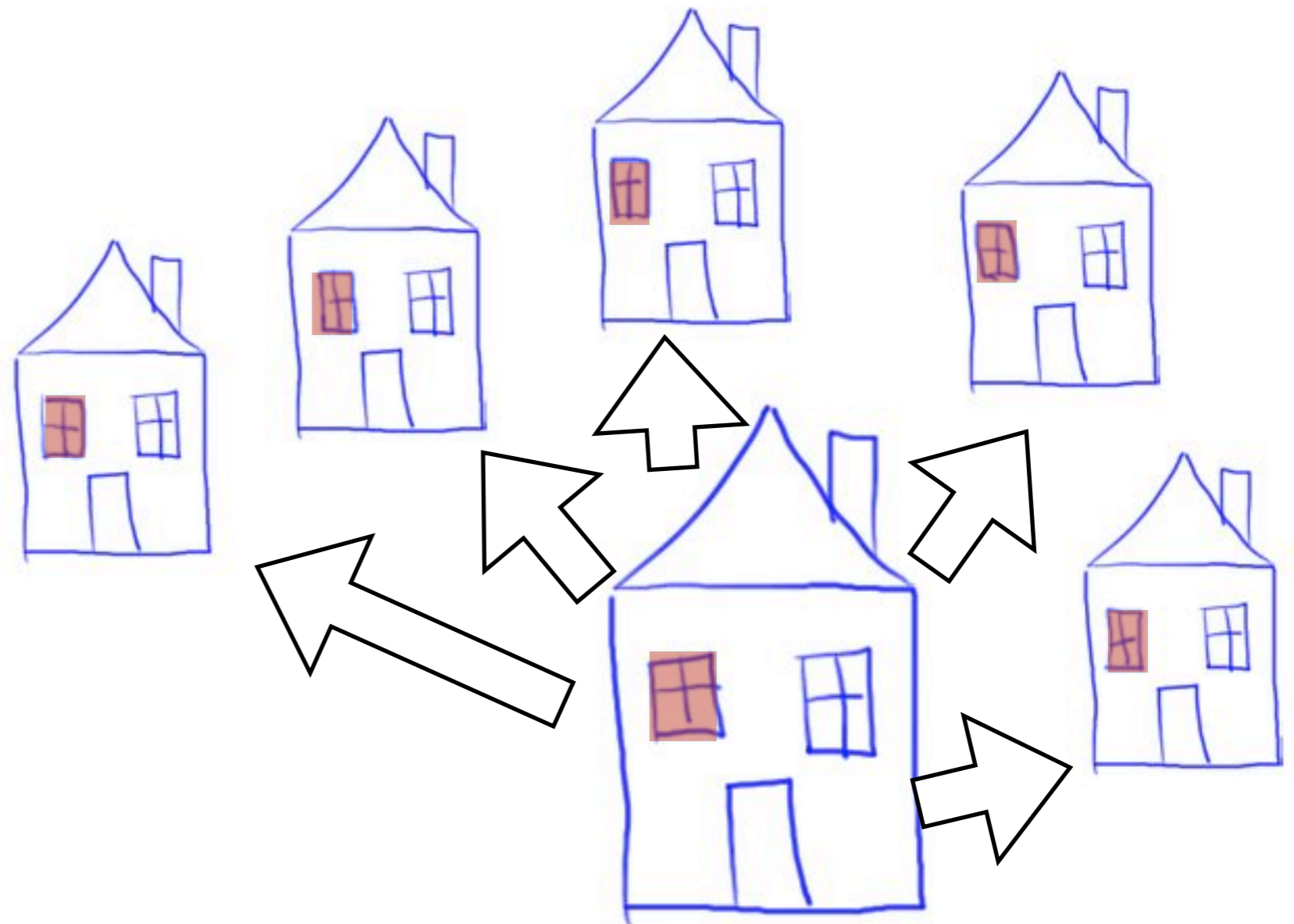
INSTANCE names
of the House class.

House



Changes to the House class
will update the **instances**.

House

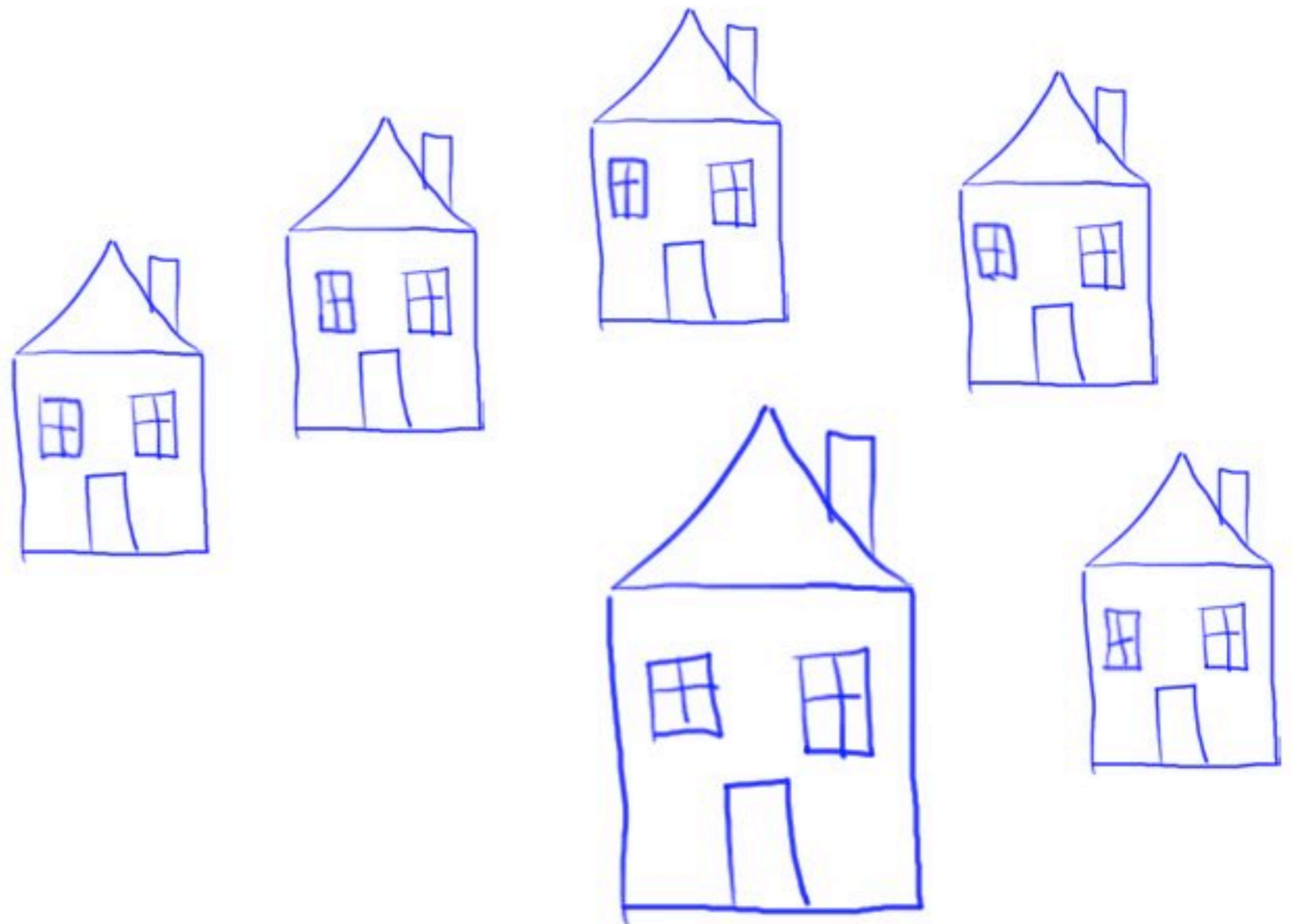


Changes to the House class
will update the **instances**.

House



Properties



Properties allow the instances to have unique characteristics.

h1.color=0x0F0



House.color:uint

A color property has been added to the House class.

h1.color=0x0F0



h2.color=0xF00



h3.color=0xFF0



h4.color=0x00F



h5.color=0x0FF



House.color:uint

The color property is now available for all instances.

h1.color=0x0F0



h2.color=0xF00



h3.color=0xFF0



h4.color=0x00F



h5.color=0x0FF



House.color:uint

The power lies in the **differences** in the instances.

h1.color=0x0F0



h2.color=0xF00



h3.color=0xFF0



h4.color=0x00F



h5.color=0x0FF



House.color:uint

The House class contains all of the **possibilities** of each house.

h1.color=0x0F0



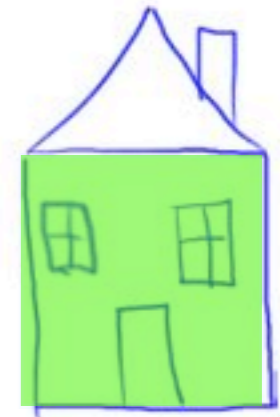
h2.color=0xF00



h3.color=0xFF0



h4.color=0x00F



h5.color=0x0FF



Although each house is similar they don't have to be exactly the same.

House.color:uint

h1.color=0x0F0



h2.color=0xF00



h3.color=0xFF0



h4.color=0x00F



h5.color=0x0FF



A class can define multiple properties.

House.color:uint

h1.color=0x0F0



h2.color=0xF00



h3.color=0xFF0



h4.color=0x00F



h5.color=0x0FF

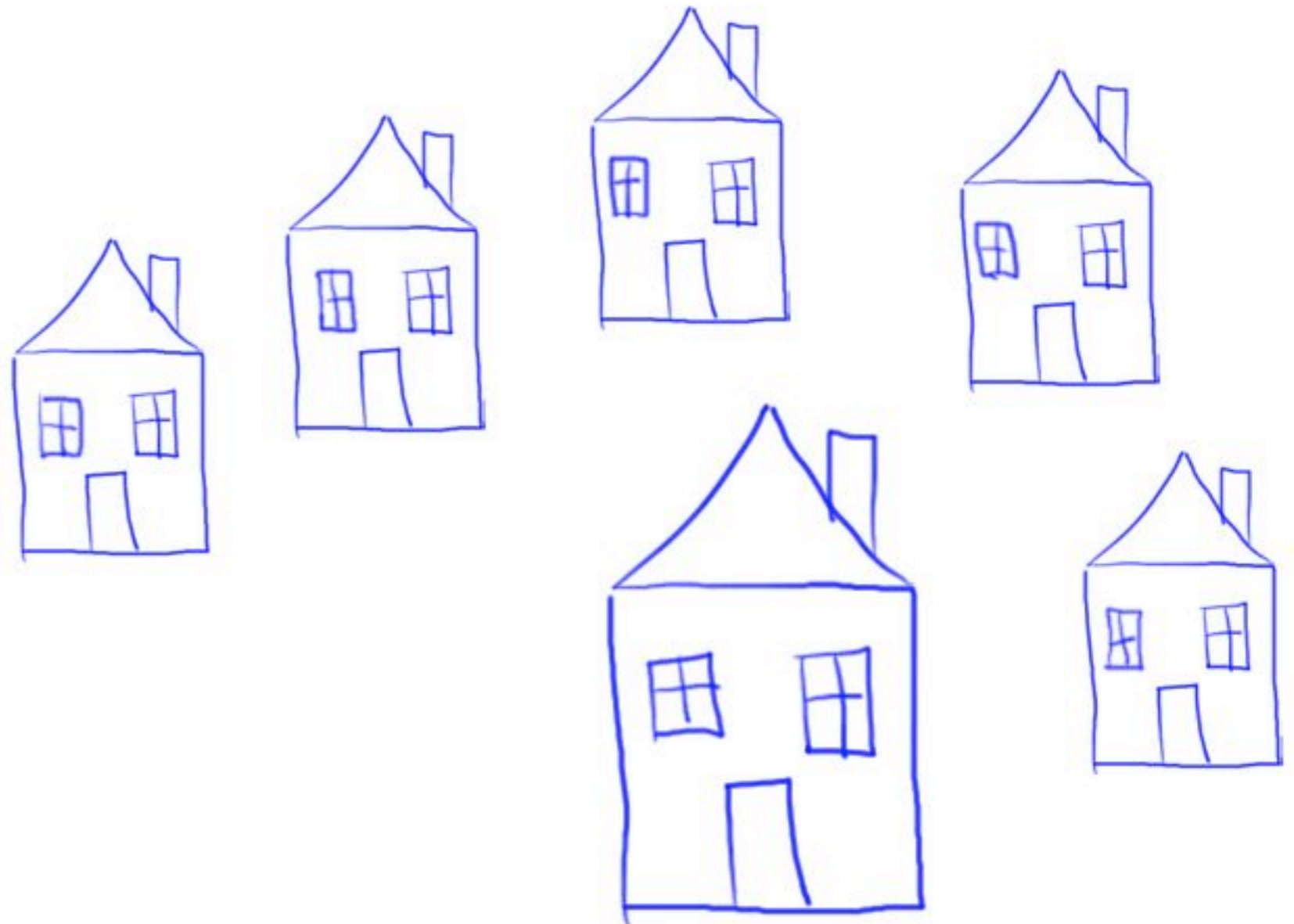


Allowing for
further flexibility.

House.color:uint

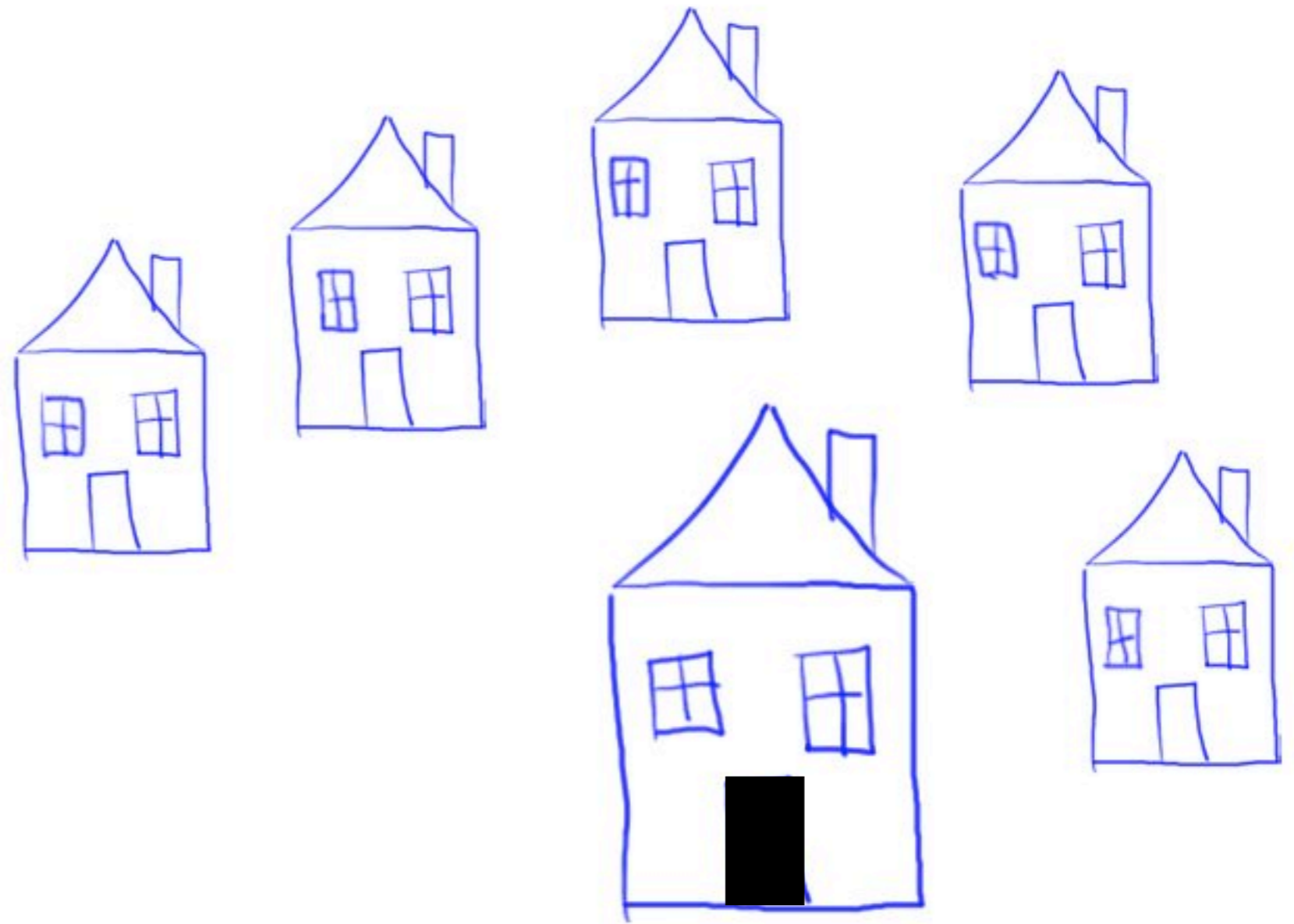
Methods





Methods are functions in a class.

House



Methods typically perform a **task**.

House.open()

`h1.open()`



Calling the method
opens the door.

`House.open()`

h1.open()



h2



h3



h4.open()



h5



Each instance can call the method but it's not required.

House.open()

h1.open()



h2.color=0xF00



h3.color=0xFF0



h4.open()



h5.color=0x0FF



Methods and properties allow unique functionality for each instance.

House.color:uint
House.open()

Access Modifiers



Access Modifiers

Allow or **restrict access** to properties and methods.

Access Modifiers

{ Public

{ Private

{ Protected

{ Internal

Access Modifiers

- { Public - Open to other Classes and the Fla
- { Private
- { Protected
- { Internal

Access Modifiers

- { Public
- { Private - Denied by other classes and fla
- { Protected
- { Internal

Access Modifiers

- { Public
- { Private
- { Protected - Can be used by extended classes
- { Internal

Access Modifiers

- { Public
- { Private
- { Protected
- { Internal - Can be accessed package wide

Classes and Objects

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