

# Ruby language - recap

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# What is Ruby

- Ruby is a programming language
- Ruby is object-oriented language
- Ruby is a high-level language

# How to run Ruby program

- Write a code in a file which name ends with ".rb"
- Use command "ruby my\_file.rb" in console

# What a program consists of

- functions (methods)
  - they start with word "def" and ends with "end"
  - each function has a name that is unique within its scope
  - functions can take a list of parameters

# What a program consists of

```
def count_sheeps(animals)

  sheeps = animals.select { |a| a.is_sheep? }

  sheeps.count

end
```

# What a program consists of

- variables
  - each variable has unique name within its scope, the name starts with small letter
  - there are local variables (e.g. "sheep") and instance (shared) variables (e.g. "@sheep")

# What a program consists of

```
def count_sheeps(animals)

  sheeps = animals.select { |a| a.is_sheep? }

  sheeps.count

end
```

# What a program consists of

```
class SheepCounter  
  def select_sheeps(animals)  
    @sheeps = animals.select { |a| a.is_sheep? }  
  end  
  
  def tell_sheeps_count  
    puts "There are #{@sheeps.count} sheeps"  
  end  
end
```



# What a program consists of

- types (classes)
  - each value has its type
  - each type has a unique name that starts with capital letter
  - we can use built-in types or define our own
  - types can inherit from each other

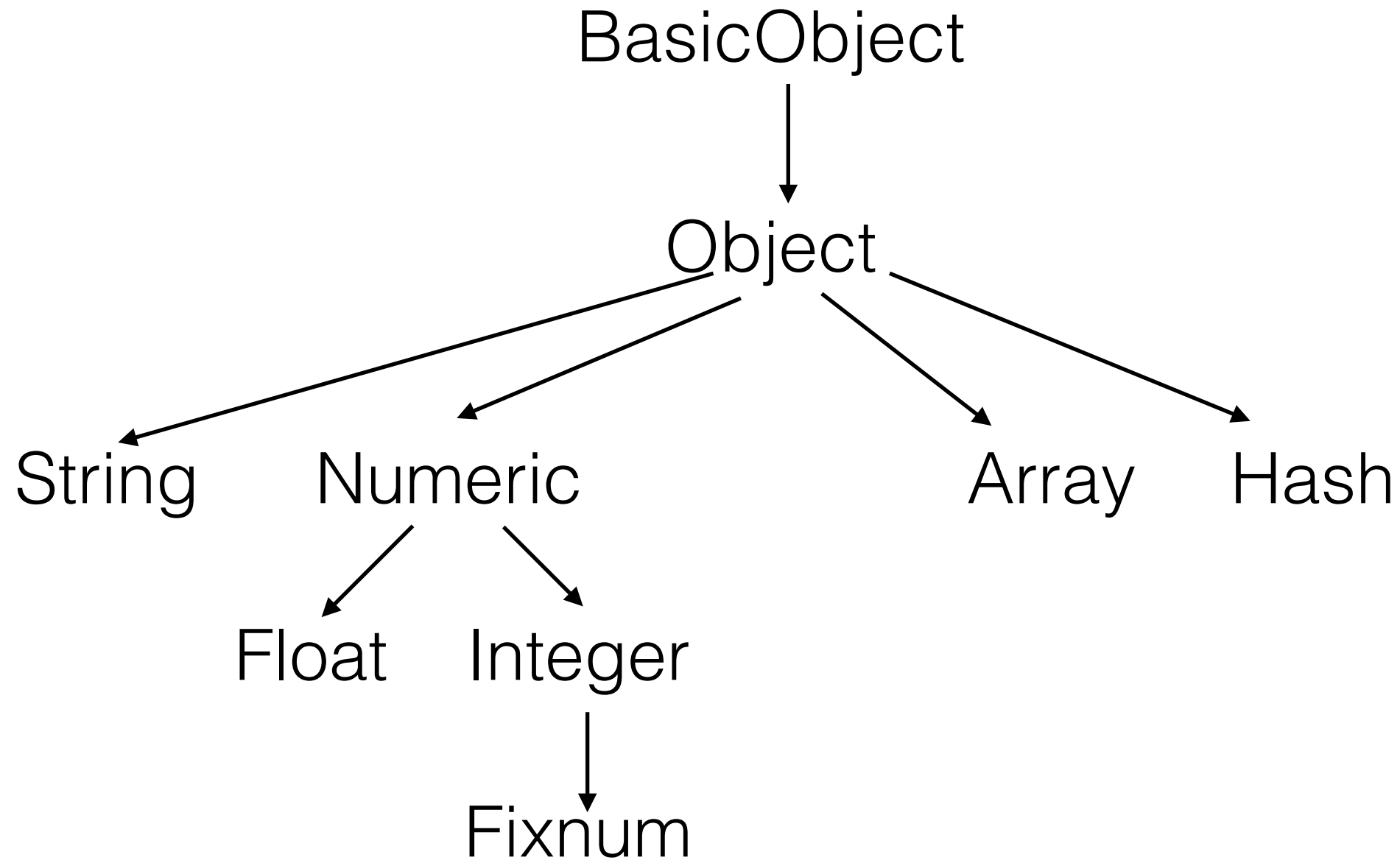
# Example values

- `nil` (`NilClass`) - represents nothing
- `"ab"` (`String`) - represents text
- `5` (`Fixnum/Integer`) - represents integer
- `9.2` (type: `Float`) - represents real number

# Example values

- `[1,2,"a"]` (Array) - represents an ordered list of values
- `{1: "a", 2: "b"}` (Hash) - represents a set of pairs of values (1st one is called key, 2nd is called value)

# Types (classes)



# Class/instance methods

- A method can be called on a class, or an instance of a class
- To count all users, we call a class method (e.g. `User.count`)
- To get a name of a single user, we call an instance method (e.g. `user = User.first; user.name`)