Evidence for Implementation and Testing Unit.

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E20

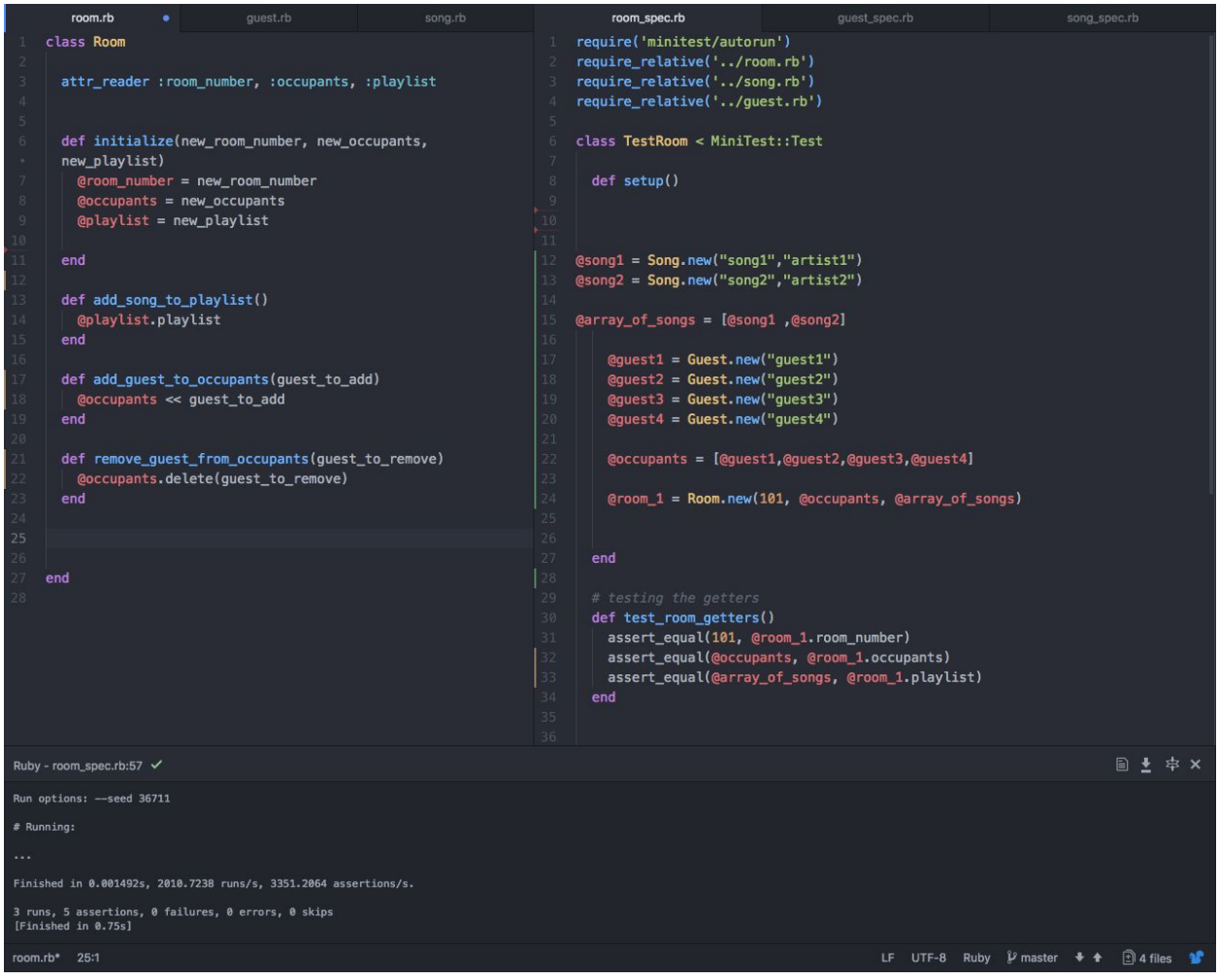
I.T 1- Demonstrate one example of encapsulation that you have written in a program.

I.T 2 - Example the use of inheritance in a program.

I.T 3 - Example of searching

I.T 4 – Example of sorting

I.T 5 - Example of an array, a function that uses an array and the result



room.rb

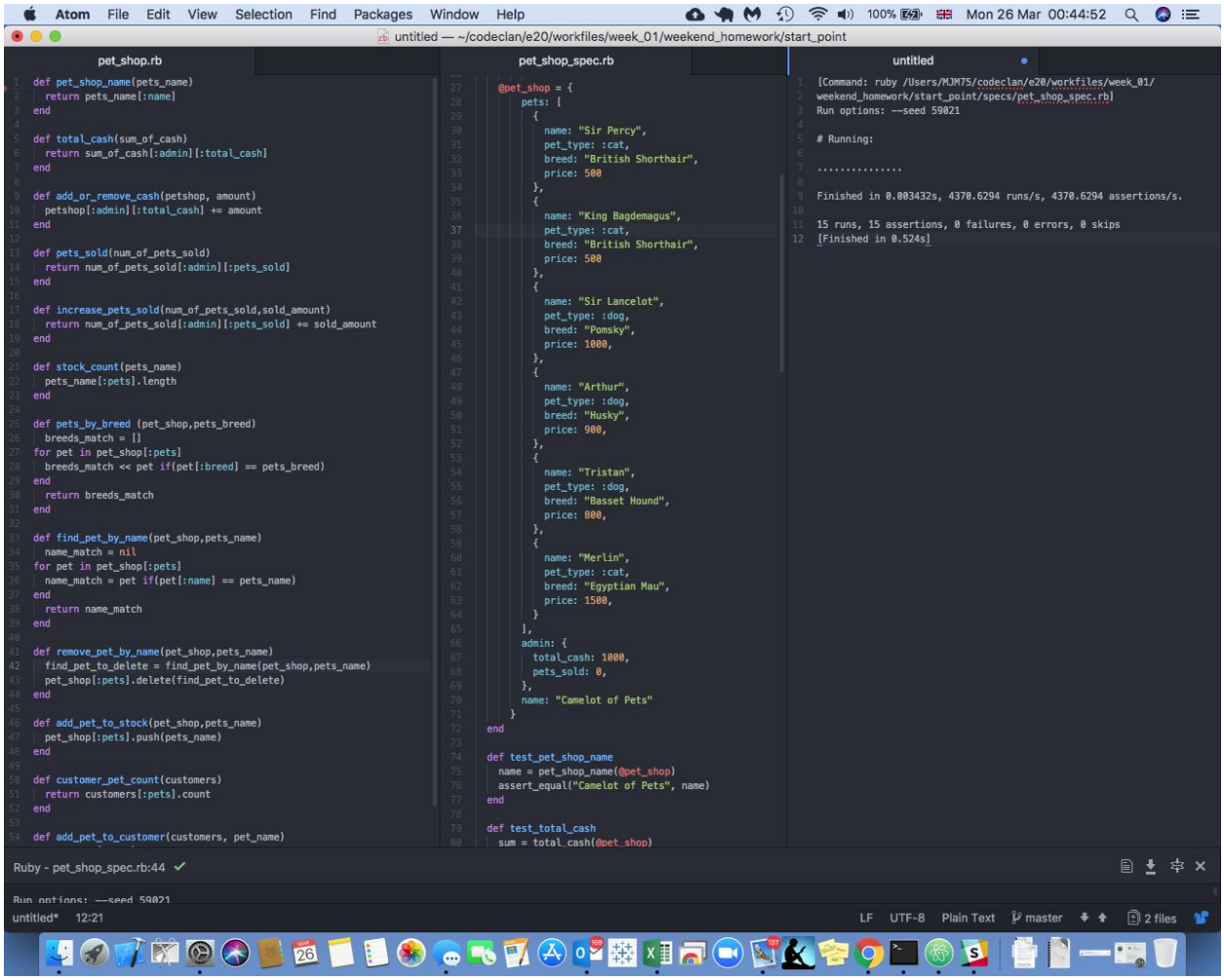
```ruby
class Room

  attr_reader :room_number, :occupants, :playlist


  def initialize(new_room_number, new_occupants,
  new_playlist)
    @room_number = new_room_number
    @occupants = new_occupants
    @playlist = new_playlist

  end

  def add_song_to_playlist()
    @playlist.playlist
  end

  def add_guest_to_occupants(guest_to_add)
    @occupants << guest_to_add
  end

  def remove_guest_from_occupants(guest_to_remove)
    @occupants.delete(guest_to_remove)
  end


end
```

room_spec.rb

```ruby
require('minitest/autorun')
require_relative('../room.rb')
require_relative('../song.rb')
require_relative('../guest.rb')

class TestRoom < MiniTest::Test

  def setup()



@song1 = Song.new("song1","artist1")
@song2 = Song.new("song2","artist2")

@array_of_songs = [@song1 ,@song2]

    @guest1 = Guest.new("guest1")
    @guest2 = Guest.new("guest2")
    @guest3 = Guest.new("guest3")
    @guest4 = Guest.new("guest4")

    @occupants = [@guest1,@guest2,@guest3,@guest4]

    @room_1 = Room.new(101, @occupants, @array_of_songs)


  end

  # testing the getters
  def test_room_getters()
    assert_equal(101, @room_1.room_number)
    assert_equal(@occupants, @room_1.occupants)
    assert_equal(@array_of_songs, @room_1.playlist)
  end
```

```
Ruby - room_spec.rb:57 ✓

Run options: --seed 36711

# Running:

...

Finished in 0.001492s, 2010.7238 runs/s, 3351.2064 assertions/s.

3 runs, 5 assertions, 0 failures, 0 errors, 0 skips
[Finished in 0.75s]

room.rb*  25:1   LF  UTF-8  Ruby  master  4 files
```

I.T 6 - Example of a hash, a function that uses a hash and the result



I.T 7 - Example of polymorphism in a program