

COMP41100

EXPLORING PROGRAMMING IN RUBY

PRACTICAL EIGHT

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Q1

Task:

Use ActiveRecord to set up a database with a number of records in it. The database should contain records for library users (with fields for name, age, books borrowed) and library books (with fields for borrower, title, borrowed---when, dueback). Note, it should be set up so that a borrower can borrow many books. Create classes for these objects and then use find to print out the attributes of the various records that you have created.

Solution:

Step 1: Create and name the database:

```
require 'active_record'
ActiveRecord::Base.establish_connection(
  :adapter => "sqlite3",
  :database => "library8")
```

Step 2: Create the tables:

```
ActiveRecord::Schema.define do
  create_table :library_users15 do |table|
    table.column :user_id, :integer
    table.column :name, :string
    table.column :age, :string
    table.column :books_borrowed, :integer
  end

  create_table :library_books15 do |table|
    table.column :books_id, :integer
    table.column :borrower_id, :integer
    table.column :title, :string
    table.column :borrowed, :string
    table.column :due_back, :string
  end
end
```

Step 3: Create associations:

```
class LibraryUsers15 < ActiveRecord::Base
  self.table_name = 'library_users15'
  has_many :library_books15
end

class LibraryBooks15 < ActiveRecord::Base
  self.table_name = 'library_books15'
  belongs_to :library_users15
end
```

Step 4: Populate and print tables:

```
libraryusers15 = LibraryUsers15.create(:user_id => 1, :name => 'Tom', :age => 10,
:books_borrowed => 3 )
librarybooks15 = LibraryBooks15.create(:books_id=> 1, :borrower_id => 1, :title =>
'Who let the dogs out?', :borrowed => '13_November_2013', :due_back =>
'21_November_2013' )

p LibraryBooks15.find(1)
p LibraryUsers15.find(1)
```

Q2

Task:

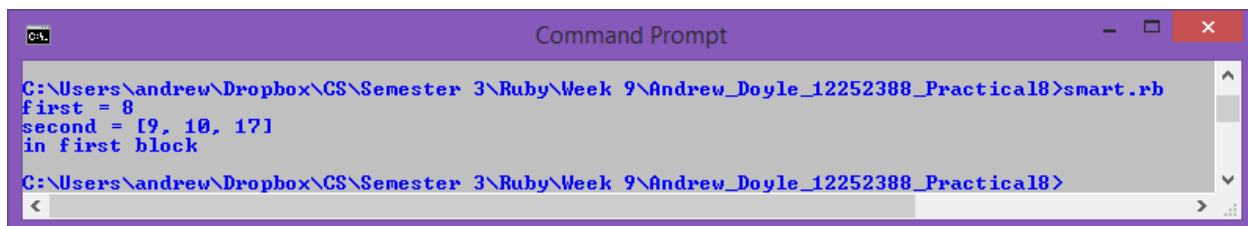
Do something really smart with the blocks and lambda stuff shown in the notes

Solution:

This example uses blocks with parameter lists between vertical bars, in conjunction with lambda:

```
smart = lambda do |first, *second, &block|  
  puts "first = #{first.inspect}"  
  puts "second = #{second.inspect}"  
  block.call  
end  
  
smart.call(8,9,10,17) {puts "in first block"}
```

Output:



```
Command Prompt  
C:\Users\andrew\Dropbox\CS\Semester 3\Ruby\Week 9\Andrew_Doyle_12252388_Practical8>smart.rb  
first = 8  
second = [9, 10, 17]  
in first block  
C:\Users\andrew\Dropbox\CS\Semester 3\Ruby\Week 9\Andrew_Doyle_12252388_Practical8>
```