Relationships between tables
Many-to-many
Relationships between tables
Many-to-many

book

has_many :through
categorization

has_many :through
category

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Viewing tables with Sqliteman

### books

<table>
<thead>
<tr>
<th>id</th>
<th>title</th>
<th>isbn</th>
<th>created</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ruby on Rails For Dummies</td>
<td>12233355566622444</td>
<td>2008-01-22</td>
</tr>
<tr>
<td>2</td>
<td>Java For Dummies</td>
<td>111222333</td>
<td>2008-01-22</td>
</tr>
</tbody>
</table>

### categorizations

<table>
<thead>
<tr>
<th>id</th>
<th>book_id</th>
<th>category_id</th>
<th>created</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>1</td>
<td>2008-02-03 21</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
<td>1</td>
<td>2008-02-03 21</td>
</tr>
</tbody>
</table>

### categories

<table>
<thead>
<tr>
<th>id</th>
<th>name</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computers</td>
<td>Computer Science, Information Systems, Computer Engineering</td>
</tr>
<tr>
<td>2</td>
<td>English</td>
<td>Composition, Creative Writing, Literature</td>
</tr>
<tr>
<td>3</td>
<td>Social Sciences</td>
<td>Psychology, Sociology, Anthropology</td>
</tr>
</tbody>
</table>
Create categories
Create categorizations
Migrate both at once
```ruby
class Book < ActiveRecord::Base
  validates_presence_of :title
  validates_inclusion_of :isbn, :in => 11111..999999999
  has_many :reviews
  has_many :categorizations
  has_many :categories, through => :categorizations
end
```

```ruby
class Categorization < ActiveRecord::Base
  belongs_to :book
  belongs_to :category
end
```

```ruby
class Category < ActiveRecord::Base
  has_many :categorizations
  has_many :books, through => :categorizations
end
```
Create categories

New category

Name
Computers

Description
Computer Science, Information Systems, Computer Engineering

Listing categories

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Show</th>
<th>Edit</th>
<th>Destroy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computers</td>
<td>Computer Science, Information Systems, Computer Engineering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>Composition, Creative Writing, Literature</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Psychology, Sociology, Anthropology</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

New category
Add a method to
Bookstore\app\controllers\books_controller.rb

```ruby
class BooksController < ApplicationController
  def set_categories
    @book = Book.find(params[:id])
    for category in Category.find(:all)
      @book.categories.delete(category)
      if params['category'+category.id.to_s]['isItChecked'] == '1'
        @book.categories << category
      end
    end
    redirect_to :action => 'show', :id => params[:id]
  end

  def add_review
    Book.find(params[:id])
  end
```
Add code to

Bookstore\app\views\books\show.html.erb