1. -Find out many books are there?
   * Book.count

=> 100

1. -View the details for book #10?
   * Book.find(10)

=> #<Book id: 10, title: "Think and Grow Rich", author: "Napoleon Hill", languag

e: "English", year: 1937, copies: 70, created\_at: "2015-02-04 02:15:52", updated

\_at: "2015-02-04 02:15:52">

1. See what books were published between 1980 to 1989? (titles only)
   * Book.where(year: 1980..1989).pluck(:title)

=> ["The Alchemist", "The Name of the Rose", "You Can Heal Your Life", "The Alch

emist", "The Name of the Rose", "You Can Heal Your Life"]

1. Do a sanitized query to count the number of books that have "the" in the title.
   * Book.where( ‘title like ?’, ‘%the%’).count

=> 60

1. Display the books ordered by author name
   * Book.order(:author).pluck(:title)

=> ["And Then There Were None", "And Then There Were None", "Black Beauty: His G

rooms and Companions: The autobiography of a horse", "Black Beauty: His Grooms a

nd Companions: The autobiography of a horse", "The Diary of a Young Girl", "The

Diary of a Young Girl", "The Little Prince", "The Little Prince", "The Tale of P

eter Rabbit", "The Tale of Peter Rabbit", "The Lion the Witch and the Wardrobe",

"The Lion the Witch and the Wardrobe", "Dream of the Red Chamber", "Dream of th

e Red Chamber", "The Adventures of Pinocchio", "The Adventures of Pinocchio", "A

Tale of Two Cities", "A Tale of Two Cities", "In His Steps: What Would Jesus Do

?", "In His Steps: What Would Jesus Do?", "The Thorn Birds", "The Thorn Birds",

"The Da Vinci Code", "Angels & Demons", "The Da Vinci Code", "Angels & Demons",

"The Common Sense Book of Baby and Child Care", "The Common Sense Book of Baby a

nd Child Care", "Charlotte's Web", "Charlotte's Web", "A Message to Garcia", "A

Message to Garcia", "Steps to Christ", "Steps to Christ", "The Very Hungry Cater

pillar", "The Very Hungry Caterpillar", "One Hundred Years of Solitude", "One Hu

ndred Years of Solitude", "She: A History of Adventure", "She: A History of Adve

nture", "The Late Great Planet Earth", "The Late Great Planet Earth", "To Kill a

Mockingbird", "To Kill a Mockingbird", "The Catcher in the Rye", "The Catcher i

n the Rye", "Harry Potter and the Deathly Hallows", "Harry Potter and the Deathl

y Hallows", "The Ginger Man", "The Ginger Man", "The Lord of the Rings", "The Ho

bbit", "The Lord of the Rings", "The Hobbit", "The Eagle Has Landed", "The Eagle

Has Landed", "Valley of the Dolls", "Valley of the Dolls", "Kane and Abel", "Ka

ne and Abel", "Heidi's Years of Wandering and Learning", "Heidi's Years of Wande

ring and Learning", "Sophie's World", "Sophie's World", "War and Peace", "War an

d Peace", "You Can Heal Your Life", "You Can Heal Your Life", "Anne of Green Gab

les", "Anne of Green Gables", "Gone with the Wind", "Gone with the Wind", "Think

and Grow Rich", "Think and Grow Rich", "How the Steel Was Tempered", "How the S

teel Was Tempered", "The Alchemist", "The Alchemist", "Watership Down", "Watersh

ip Down", "Jonathan Livingston Seagull", "Jonathan Livingston Seagull", "The Pur

pose Driven Life", "The Purpose Driven Life", "The Bridges of Madison County", "

The Bridges of Madison County", "The Hite Report", "The Hite Report", "The Girl

with the Dragon Tattoo", "The Girl with the Dragon Tattoo", "The Name of the Ros

e", "The Name of the Rose", "Flowers in the Attic", "Flowers in the Attic", "Lol

ita", "Lolita", "Your Erroneous Zones", "Your Erroneous Zones", "The Revolt of M

amie Stover", "The Revolt of Mamie Stover"]

1. Display the books ordered by copies sold, from most to least
   * Book.order(:copies).pluck(:title)

=> ["In His Steps: What Would Jesus Do?", "To Kill a Mockingbird", "Valley of th

e Dolls", "Gone with the Wind", "The Diary of a Young Girl", "One Hundred Years

of Solitude", "The Purpose Driven Life", "The Thorn Birds", "The Revolt of Mamie

Stover", "The Girl with the Dragon Tattoo", "The Very Hungry Caterpillar", "In

His Steps: What Would Jesus Do?", "To Kill a Mockingbird", "Valley of the Dolls"

, "Gone with the Wind", "The Diary of a Young Girl", "One Hundred Years of Solit

ude", "The Purpose Driven Life", "The Thorn Birds", "The Revolt of Mamie Stover"

, "The Girl with the Dragon Tattoo", "The Very Hungry Caterpillar", "Kane and Ab

el", "Kane and Abel", "The Adventures of Pinocchio", "You Can Heal Your Life", "

Your Erroneous Zones", "The Late Great Planet Earth", "The Adventures of Pinocch

io", "You Can Heal Your Life", "Your Erroneous Zones", "The Late Great Planet Ea

rth", "How the Steel Was Tempered", "War and Peace", "How the Steel Was Tempered

", "War and Peace", "Angels & Demons", "Angels & Demons", "Jonathan Livingston S

eagull", "A Message to Garcia", "Sophie's World", "Flowers in the Attic", "Jonat

han Livingston Seagull", "A Message to Garcia", "Sophie's World", "Flowers in th

e Attic", "Harry Potter and the Deathly Hallows", "Harry Potter and the Deathly

Hallows", "The Tale of Peter Rabbit", "The Tale of Peter Rabbit", "Lolita", "Hei

di's Years of Wandering and Learning", "The Common Sense Book of Baby and Child

Care", "Anne of Green Gables", "Black Beauty: His Grooms and Companions: The aut

obiography of a horse", "The Name of the Rose", "The Eagle Has Landed", "Watersh

ip Down", "The Hite Report", "Charlotte's Web", "The Ginger Man", "The Bridges o

f Madison County", "Lolita", "Heidi's Years of Wandering and Learning", "The Com

mon Sense Book of Baby and Child Care", "Anne of Green Gables", "Black Beauty: H

is Grooms and Companions: The autobiography of a horse", "The Name of the Rose",

"The Eagle Has Landed", "Watership Down", "The Hite Report", "Charlotte's Web",

"The Ginger Man", "The Bridges of Madison County", "Steps to Christ", "Steps to

Christ", "The Catcher in the Rye", "The Alchemist", "The Catcher in the Rye", "

The Alchemist", "Think and Grow Rich", "Think and Grow Rich", "The Da Vinci Code

", "The Da Vinci Code", "The Lion the Witch and the Wardrobe", "The Lion the Wit

ch and the Wardrobe", "And Then There Were None", "Dream of the Red Chamber", "T

he Hobbit", "She: A History of Adventure", "And Then There Were None", "Dream of

the Red Chamber", "The Hobbit", "She: A History of Adventure", "The Little Prin

ce", "The Little Prince", "The Lord of the Rings", "The Lord of the Rings", "A T

ale of Two Cities", "A Tale of Two Cities"]

1. Display the books ordered by copies sold, from least to most
   * Book.order(:copies).reverse\_order.pluck(:title)

=> ["A Tale of Two Cities", "A Tale of Two Cities", "The Lord of the Rings", "Th

e Lord of the Rings", "The Little Prince", "The Little Prince", "And Then There

Were None", "Dream of the Red Chamber", "The Hobbit", "She: A History of Adventu

re", "And Then There Were None", "Dream of the Red Chamber", "The Hobbit", "She:

A History of Adventure", "The Lion the Witch and the Wardrobe", "The Lion the W

itch and the Wardrobe", "The Da Vinci Code", "The Da Vinci Code", "Think and Gro

w Rich", "Think and Grow Rich", "The Catcher in the Rye", "The Alchemist", "The

Catcher in the Rye", "The Alchemist", "Steps to Christ", "Steps to Christ", "Lol

ita", "Heidi's Years of Wandering and Learning", "The Common Sense Book of Baby

and Child Care", "Anne of Green Gables", "Black Beauty: His Grooms and Companion

s: The autobiography of a horse", "The Name of the Rose", "The Eagle Has Landed"

, "Watership Down", "The Hite Report", "Charlotte's Web", "The Ginger Man", "The

Bridges of Madison County", "Lolita", "Heidi's Years of Wandering and Learning"

, "The Common Sense Book of Baby and Child Care", "Anne of Green Gables", "Black

Beauty: His Grooms and Companions: The autobiography of a horse", "The Name of

the Rose", "The Eagle Has Landed", "Watership Down", "The Hite Report", "Charlot

te's Web", "The Ginger Man", "The Bridges of Madison County", "The Tale of Peter

Rabbit", "The Tale of Peter Rabbit", "Harry Potter and the Deathly Hallows", "H

arry Potter and the Deathly Hallows", "Jonathan Livingston Seagull", "A Message

to Garcia", "Sophie's World", "Flowers in the Attic", "Jonathan Livingston Seagu

ll", "A Message to Garcia", "Sophie's World", "Flowers in the Attic", "Angels &

Demons", "Angels & Demons", "How the Steel Was Tempered", "War and Peace", "How

the Steel Was Tempered", "War and Peace", "The Adventures of Pinocchio", "You Ca

n Heal Your Life", "Your Erroneous Zones", "The Late Great Planet Earth", "The A

dventures of Pinocchio", "You Can Heal Your Life", "Your Erroneous Zones", "The

Late Great Planet Earth", "Kane and Abel", "Kane and Abel", "In His Steps: What

Would Jesus Do?", "To Kill a Mockingbird", "Valley of the Dolls", "Gone with the

Wind", "The Diary of a Young Girl", "One Hundred Years of Solitude", "The Purpo

se Driven Life", "The Thorn Birds", "The Revolt of Mamie Stover", "The Girl with

the Dragon Tattoo", "The Very Hungry Caterpillar", "In His Steps: What Would Je

sus Do?", "To Kill a Mockingbird", "Valley of the Dolls", "Gone with the Wind",

"The Diary of a Young Girl", "One Hundred Years of Solitude", "The Purpose Drive

n Life", "The Thorn Birds", "The Revolt of Mamie Stover", "The Girl with the Dra

gon Tattoo", "The Very Hungry Caterpillar"]

1. Display the books written in the 20th century (1900s) in English
   * Book.where(language: “English” , year: 1900..1999)

=> #<ActiveRecord::Relation [#<Book id: 2, title: "The Lord of the Rings", autho

r: "J. R. R. Tolkien", language: "English", year: 1954, copies: 150, created\_at:

"2015-02-04 02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book id: 4, title:

"And Then There Were None", author: "Agatha Christie", language: "English", yea

r: 1939, copies: 100, created\_at: "2015-02-04 02:15:52", updated\_at: "2015-02-04

02:15:52">, #<Book id: 6, title: "The Hobbit", author: "J. R. R. Tolkien", lang

uage: "English", year: 1937, copies: 100, created\_at: "2015-02-04 02:15:52", upd

ated\_at: "2015-02-04 02:15:52">, #<Book id: 8, title: "The Lion the Witch and th

e Wardrobe", author: "C. S. Lewis", language: "English", year: 1950, copies: 85,

created\_at: "2015-02-04 02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book i

d: 10, title: "Think and Grow Rich", author: "Napoleon Hill", language: "English

", year: 1937, copies: 70, created\_at: "2015-02-04 02:15:52", updated\_at: "2015-

02-04 02:15:52">, #<Book id: 11, title: "The Catcher in the Rye", author: "J. D.

Salinger", language: "English", year: 1951, copies: 65, created\_at: "2015-02-04

02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book id: 14, title: "Lolita",

author: "Vladimir Nabokov", language: "English", year: 1955, copies: 50, created

\_at: "2015-02-04 02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book id: 16, t

itle: "The Common Sense Book of Baby and Child Care", author: "Dr. Benjamin Spoc

k", language: "English", year: 1946, copies: 50, created\_at: "2015-02-04 02:15:5

2", updated\_at: "2015-02-04 02:15:52">, #<Book id: 17, title: "Anne of Green Gab

les", author: "Lucy Maud Montgomery", language: "English", year: 1908, copies: 5

0, created\_at: "2015-02-04 02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book

id: 20, title: "The Eagle Has Landed", author: "Jack Higgins", language: "Engli

sh", year: 1975, copies: 50, created\_at: "2015-02-04 02:15:52", updated\_at: "201

5-02-04 02:15:52">, ...]>

1. Display 5 books written in the 20th century in English
   * Book.where(language: “English” , year: 1900..1999).limit(5)

=> #<ActiveRecord::Relation [#<Book id: 2, title: "The Lord of the Rings", autho

r: "J. R. R. Tolkien", language: "English", year: 1954, copies: 150, created\_at:

"2015-02-04 02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book id: 4, title:

"And Then There Were None", author: "Agatha Christie", language: "English", yea

r: 1939, copies: 100, created\_at: "2015-02-04 02:15:52", updated\_at: "2015-02-04

02:15:52">, #<Book id: 6, title: "The Hobbit", author: "J. R. R. Tolkien", lang

uage: "English", year: 1937, copies: 100, created\_at: "2015-02-04 02:15:52", upd

ated\_at: "2015-02-04 02:15:52">, #<Book id: 8, title: "The Lion the Witch and th

e Wardrobe", author: "C. S. Lewis", language: "English", year: 1950, copies: 85,

created\_at: "2015-02-04 02:15:52", updated\_at: "2015-02-04 02:15:52">, #<Book i

d: 10, title: "Think and Grow Rich", author: "Napoleon Hill", language: "English

", year: 1937, copies: 70, created\_at: "2015-02-04 02:15:52", updated\_at: "2015-

02-04 02:15:52">]>

1. Display the books grouped by language
   * Book.groun(:language)

=> #<ActiveRecord::Relation [#<Book id: 55, title: "Dream of the Red Chamber", a

uthor: "Cao Xueqin", language: "Chinese", year: 1745, copies: 100, created\_at: "

2015-02-04 02:16:30", updated\_at: "2015-02-04 02:16:30">, #<Book id: 94, title:

"The Diary of a Young Girl", author: "Anne Frank", language: "Dutch", year: 1947

, copies: 30, created\_at: "2015-02-04 02:16:31", updated\_at: "2015-02-04 02:16:3

1">, #<Book id: 100, title: "The Very Hungry Caterpillar", author: "Eric Carle",

language: "English", year: 1969, copies: 30, created\_at: "2015-02-04 02:16:31",

updated\_at: "2015-02-04 02:16:31">, #<Book id: 53, title: "The Little Prince",

author: "Antoine de Saint-Exupery", language: "French", year: 1943, copies: 140,

created\_at: "2015-02-04 02:16:30", updated\_at: "2015-02-04 02:16:30">, #<Book i

d: 65, title: "Heidi's Years of Wandering and Learning", author: "Johanna Spyri"

, language: "German", year: 1880, copies: 50, created\_at: "2015-02-04 02:16:30",

updated\_at: "2015-02-04 02:16:30">, #<Book id: 85, title: "The Adventures of Pi

nocchio", author: "Carlo Collodi", language: "Italian", year: 1881, copies: 35,

created\_at: "2015-02-04 02:16:31", updated\_at: "2015-02-04 02:16:31">, #<Book id

: 80, title: "Sophie's World", author: "Jostein Gaarder", language: "Norwegian",

year: 1991, copies: 40, created\_at: "2015-02-04 02:16:30", updated\_at: "2015-02

-04 02:16:30">, #<Book id: 62, title: "The Alchemist", author: "Paulo Coelho", l

anguage: "Portuguese", year: 1988, copies: 65, created\_at: "2015-02-04 02:16:30"

, updated\_at: "2015-02-04 02:16:30">, #<Book id: 84, title: "War and Peace", aut

hor: "Leo Tolstoy", language: "Russian", year: 1869, copies: 36, created\_at: "20

15-02-04 02:16:31", updated\_at: "2015-02-04 02:16:31">, #<Book id: 95, title: "O

ne Hundred Years of Solitude", author: "Gabriel Garcia Marquez", language: "Span

ish", year: 1967, copies: 30, created\_at: "2015-02-04 02:16:31", updated\_at: "20

15-02-04 02:16:31">, ...]>

1. Determine the maximum copies for any book sold between 1950 and 1999
   * Book.where(year: 1950..1999).maximum(:copies)

=> 150

1. Determine the average copies for books sold between 2000 and 2010 (in readable format)
   * Book.where(year: 2000..2010).average(:copies).to\_s

=> “44.6”

1. Change the number of copies for "The Hobbit" from 100 to 101

irb(main):036:0> Book.where(title: "The Hobbit").first["copies"]

Book Load (0.0ms) SELECT "books".\* FROM "books" WHERE "books"."title" = 'Th

e Hobbit' ORDER BY "books"."id" ASC LIMIT 1

=> 100

irb(main):037:0> b = Book.where(title: "The Hobbit").first

Book Load (0.0ms) SELECT "books".\* FROM "books" WHERE "books"."title" = 'Th

e Hobbit' ORDER BY "books"."id" ASC LIMIT 1

=> #<Book id: 6, title: "The Hobbit", author: "J. R. R. Tolkien", language: "Eng

lish", year: 1937, copies: 100, created\_at: "2015-02-04 02:15:52", updated\_at: "

2015-02-04 02:15:52">

irb(main):038:0> b.copies = 101

=> 101

irb(main):039:0> b.save

(0.0ms) begin transaction

SQL (1.0ms) UPDATE "books" SET "copies" = ?, "updated\_at" = ? WHERE "books"."

id" = 6 [["copies", 101], ["updated\_at", "2015-02-04 03:33:32.029844"]]

(15.7ms) commit transaction

=> true

irb(main):040:0> Book.where(title: "The Hobbit").first["copies"]

Book Load (0.0ms) SELECT "books".\* FROM "books" WHERE "books"."title" = 'Th

e Hobbit' ORDER BY "books"."id" ASC LIMIT 1

=> 101

irb(main):041:0>