1. -Find out many books are there?

irb(main):001:0> Book.count

(0.0ms) SELECT COUNT(\*) FROM "books"

=> 50

1. -View the details for book #10?

irb(main):002:0> Book.find(10)

Book Load (0.0ms) SELECT "books".\* FROM "books" WHERE "books"."id" = ? LIMIT

1 [["id", 10]]

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

e: "English", year: 1937, copies: 70, created\_at: "2015-02-04 23:38:36", updated

\_at: "2015-02-04 23:38:36">

1. See what books were published between 1980 to 1989? (titles only)

irb(main):003:0> Book.where(year: 1980..1989).pluck(:title)

(0.0ms) SELECT "books"."title" FROM "books" WHERE ("books"."year" BETWEEN 19

80 AND 1989)

=> ["The Alchemist", "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.

irb(main):005:0> Book.where( 'title like ?', '%the%' ).count

(0.0ms) SELECT COUNT(\*) FROM "books" WHERE (title like '%the%')

=> 30

1. Display the books ordered by author name

irb(main):006:0> Book.order(:author)

Book Load (0.0ms) SELECT "books".\* FROM "books" ORDER BY "books"."author" AS

C

=> #<ActiveRecord::Relation [#<Book id: 4, title: "And Then There Were None", au

thor: "Agatha Christie", language: "English", year: 1939, copies: 100, created\_a

t: "2015-02-04 23:38:34", updated\_at: "2015-02-04 23:38:34">, #<Book id: 18, tit

le: "Black Beauty: His Grooms and Companions: The autob...", author: "Anna Sewel

l", language: "English", year: 1877, copies: 50, created\_at: "2015-02-04 23:38:3

8", updated\_at: "2015-02-04 23:38:38">, #<Book id: 44, title: "The Diary of a Yo

ung Girl", author: "Anne Frank", language: "Dutch", year: 1947, copies: 30, crea

ted\_at: "2015-02-04 23:38:45", updated\_at: "2015-02-04 23:38:45">, #<Book id: 3,

title: "The Little Prince", author: "Antoine de Saint-Exupery", language: "Fren

ch", year: 1943, copies: 140, created\_at: "2015-02-04 23:38:33", updated\_at: "20

15-02-04 23:38:33">, #<Book id: 26, title: "The Tale of Peter Rabbit", author: "

Beatrix Potter", language: "English", year: 1902, copies: 45, created\_at: "2015-

02-04 23:38:40", updated\_at: "2015-02-04 23:38:40">, #<Book id: 8, title: "The L

ion the Witch and the Wardrobe", author: "C. S. Lewis", language: "English", yea

r: 1950, copies: 85, created\_at: "2015-02-04 23:38:35", updated\_at: "2015-02-04

23:38:35">, #<Book id: 5, title: "Dream of the Red Chamber", author: "Cao Xueqin

", language: "Chinese", year: 1745, copies: 100, created\_at: "2015-02-04 23:38:3

4", updated\_at: "2015-02-04 23:38:34">, #<Book id: 35, title: "The Adventures of

Pinocchio", author: "Carlo Collodi", language: "Italian", year: 1881, copies: 3

5, created\_at: "2015-02-04 23:38:43", updated\_at: "2015-02-04 23:38:43">, #<Book

id: 1, title: "A Tale of Two Cities", author: "Charles Dickens", language: "Eng

lish", year: 1859, copies: 200, created\_at: "2015-02-04 23:38:33", updated\_at: "

2015-02-04 23:38:33">, #<Book id: 40, title: "In His Steps: What Would Jesus Do?

", author: "Charles M. Sheldon", language: "English", year: 1896, copies: 30, cr

eated\_at: "2015-02-04 23:38:44", updated\_at: "2015-02-04 23:38:44">, ...]>

1. Display the books ordered by copies sold, from most to least

irb(main):009:0> Book.order(:copies) .reverse\_order

Book Load (0.0ms) SELECT "books".\* FROM "books" ORDER BY "books"."copies" DE

SC

=> #<ActiveRecord::Relation [#<Book id: 1, title: "A Tale of Two Cities", author

: "Charles Dickens", language: "English", year: 1859, copies: 200, created\_at: "

2015-02-04 23:38:33", updated\_at: "2015-02-04 23:38:33">, #<Book id: 2, title: "

The Lord of the Rings", author: "J. R. R. Tolkien", language: "English", year: 1

954, copies: 150, created\_at: "2015-02-04 23:38:33", updated\_at: "2015-02-04 23:

38:33">, #<Book id: 3, title: "The Little Prince", author: "Antoine de Saint-Exu

pery", language: "French", year: 1943, copies: 140, created\_at: "2015-02-04 23:3

8:33", updated\_at: "2015-02-04 23:38:33">, #<Book id: 4, title: "And Then There

Were None", author: "Agatha Christie", language: "English", year: 1939, copies:

100, created\_at: "2015-02-04 23:38:34", updated\_at: "2015-02-04 23:38:34">, #<Bo

ok id: 5, title: "Dream of the Red Chamber", author: "Cao Xueqin", language: "Ch

inese", year: 1745, copies: 100, created\_at: "2015-02-04 23:38:34", updated\_at:

"2015-02-04 23:38:34">, #<Book id: 6, title: "The Hobbit", author: "J. R. R. Tol

kien", language: "English", year: 1937, copies: 100, created\_at: "2015-02-04 23:

38:34", updated\_at: "2015-02-04 23:38:34">, #<Book id: 7, title: "She: A History

of Adventure", author: "H. Rider Haggard", language: "English", year: 1887, cop

ies: 100, created\_at: "2015-02-04 23:38:35", updated\_at: "2015-02-04 23:38:35">,

#<Book id: 8, title: "The Lion the Witch and the Wardrobe", author: "C. S. Lewi

s", language: "English", year: 1950, copies: 85, created\_at: "2015-02-04 23:38:3

5", updated\_at: "2015-02-04 23:38:35">, #<Book id: 9, title: "The Da Vinci Code"

, author: "Dan Brown", language: "English", year: 2003, copies: 80, created\_at:

"2015-02-04 23:38:35", updated\_at: "2015-02-04 23:38:35">, #<Book id: 10, title:

"Think and Grow Rich", author: "Napoleon Hill", language: "English", year: 1937

, copies: 70, created\_at: "2015-02-04 23:38:36", updated\_at: "2015-02-04 23:38:3

6">, ...]>

1. Display the books ordered by copies sold, from least to most

irb(main):024:0> Book.order(:copies)

Book Load (0.0ms) SELECT "books".\* FROM "books" ORDER BY "books"."copies" AS

C

=> #<ActiveRecord::Relation [#<Book id: 40, title: "In His Steps: What Would Jes

us Do?", author: "Charles M. Sheldon", language: "English", year: 1896, copies:

30, created\_at: "2015-02-04 23:38:44", updated\_at: "2015-02-04 23:38:44">, #<Boo

k id: 41, title: "To Kill a Mockingbird", author: "Harper Lee", language: "Engli

sh", year: 1960, copies: 30, created\_at: "2015-02-04 23:38:45", updated\_at: "201

5-02-04 23:38:45">, #<Book id: 42, title: "Valley of the Dolls", author: "Jacque

line Susann", language: "English", year: 1966, copies: 30, created\_at: "2015-02-

04 23:38:45", updated\_at: "2015-02-04 23:38:45">, #<Book id: 43, title: "Gone wi

th the Wind", author: "Margaret Mitchell", language: "English", year: 1936, copi

es: 30, created\_at: "2015-02-04 23:38:45", updated\_at: "2015-02-04 23:38:45">, #

<Book id: 44, title: "The Diary of a Young Girl", author: "Anne Frank", language

: "Dutch", year: 1947, copies: 30, created\_at: "2015-02-04 23:38:45", updated\_at

: "2015-02-04 23:38:45">, #<Book id: 45, title: "One Hundred Years of Solitude",

author: "Gabriel Garcia Marquez", language: "Spanish", year: 1967, copies: 30,

created\_at: "2015-02-04 23:38:46", updated\_at: "2015-02-04 23:38:46">, #<Book id

: 46, title: "The Purpose Driven Life", author: "Rick Warren", language: "Englis

h", year: 2002, copies: 30, created\_at: "2015-02-04 23:38:46", updated\_at: "2015

-02-04 23:38:46">, #<Book id: 47, title: "The Thorn Birds", author: "Colleen McC

ullough", language: "English", year: 1977, copies: 30, created\_at: "2015-02-04 2

3:38:47", updated\_at: "2015-02-04 23:38:47">, #<Book id: 48, title: "The Revolt

of Mamie Stover", author: "William Bradford Huie", language: "English", year: 19

51, copies: 30, created\_at: "2015-02-04 23:38:47", updated\_at: "2015-02-04 23:38

:47">, #<Book id: 49, title: "The Girl with the Dragon Tattoo", author: "Stieg L

arsson", language: "Swedish", year: 2005, copies: 30, created\_at: "2015-02-04 23

:38:47", updated\_at: "2015-02-04 23:38:47">, ...]>

1. Display the books written in the 20th century (1900s) in English

irb(main):011:0> Book.where(year: 1900..1999, language: "English")

Book Load (0.0ms) SELECT "books".\* FROM "books" WHERE "books"."language" = ?

AND ("books"."year" BETWEEN 1900 AND 1999) [["language", "English"]]

=> #<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 23:38:33", updated\_at: "2015-02-04 23:38:33">, #<Book id: 4, title:

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

r: 1939, copies: 100, created\_at: "2015-02-04 23:38:34", updated\_at: "2015-02-04

23:38:34">, #<Book id: 6, title: "The Hobbit", author: "J. R. R. Tolkien", lang

uage: "English", year: 1937, copies: 100, created\_at: "2015-02-04 23:38:34", upd

ated\_at: "2015-02-04 23:38:34">, #<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 23:38:35", updated\_at: "2015-02-04 23:38:35">, #<Book i

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

", year: 1937, copies: 70, created\_at: "2015-02-04 23:38:36", updated\_at: "2015-

02-04 23:38:36">, #<Book id: 11, title: "The Catcher in the Rye", author: "J. D.

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

23:38:36", updated\_at: "2015-02-04 23:38:36">, #<Book id: 14, title: "Lolita",

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

\_at: "2015-02-04 23:38:37", updated\_at: "2015-02-04 23:38:37">, #<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 23:38:3

7", updated\_at: "2015-02-04 23:38:37">, #<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 23:38:37", updated\_at: "2015-02-04 23:38:37">, #<Book

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

sh", year: 1975, copies: 50, created\_at: "2015-02-04 23:38:38", updated\_at: "201

5-02-04 23:38:38">, ...]>

1. Display 5 books written in the 20th century in English

irb(main):012:0> Book.where(year: 1900..1999, language: "English").limit(5)

Book Load (0.0ms) SELECT "books".\* FROM "books" WHERE "books"."language" = ?

AND ("books"."year" BETWEEN 1900 AND 1999) LIMIT 5 [["language", "English"]]

=> #<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 23:38:33", updated\_at: "2015-02-04 23:38:33">, #<Book id: 4, title:

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

r: 1939, copies: 100, created\_at: "2015-02-04 23:38:34", updated\_at: "2015-02-04

23:38:34">, #<Book id: 6, title: "The Hobbit", author: "J. R. R. Tolkien", lang

uage: "English", year: 1937, copies: 100, created\_at: "2015-02-04 23:38:34", upd

ated\_at: "2015-02-04 23:38:34">, #<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 23:38:35", updated\_at: "2015-02-04 23:38:35">, #<Book i

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

", year: 1937, copies: 70, created\_at: "2015-02-04 23:38:36", updated\_at: "2015-

02-04 23:38:36">]>

1. Display the books grouped by language

irb(main):013:0> Book.group(:language)

Book Load (0.0ms) SELECT "books".\* FROM "books" GROUP BY language

=> #<ActiveRecord::Relation [#<Book id: 5, title: "Dream of the Red Chamber", au

thor: "Cao Xueqin", language: "Chinese", year: 1745, copies: 100, created\_at: "2

015-02-04 23:38:34", updated\_at: "2015-02-04 23:38:34">, #<Book id: 44, title: "

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

copies: 30, created\_at: "2015-02-04 23:38:45", updated\_at: "2015-02-04 23:38:45

">, #<Book id: 50, title: "The Very Hungry Caterpillar", author: "Eric Carle", l

anguage: "English", year: 1969, copies: 30, created\_at: "2015-02-04 23:38:47", u

pdated\_at: "2015-02-04 23:38:47">, #<Book id: 3, title: "The Little Prince", aut

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

eated\_at: "2015-02-04 23:38:33", updated\_at: "2015-02-04 23:38:33">, #<Book id:

15, title: "Heidi's Years of Wandering and Learning", author: "Johanna Spyri", l

anguage: "German", year: 1880, copies: 50, created\_at: "2015-02-04 23:38:37", up

dated\_at: "2015-02-04 23:38:37">, #<Book id: 35, title: "The Adventures of Pinoc

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

ated\_at: "2015-02-04 23:38:43", updated\_at: "2015-02-04 23:38:43">, #<Book id: 3

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

ar: 1991, copies: 40, created\_at: "2015-02-04 23:38:41", updated\_at: "2015-02-04

23:38:41">, #<Book id: 12, title: "The Alchemist", author: "Paulo Coelho", lang

uage: "Portuguese", year: 1988, copies: 65, created\_at: "2015-02-04 23:38:36", u

pdated\_at: "2015-02-04 23:38:36">, #<Book id: 34, title: "War and Peace", author

: "Leo Tolstoy", language: "Russian", year: 1869, copies: 36, created\_at: "2015-

02-04 23:38:43", updated\_at: "2015-02-04 23:38:43">, #<Book id: 45, title: "One

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

", year: 1967, copies: 30, created\_at: "2015-02-04 23:38:46", updated\_at: "2015-

02-04 23:38:46">, ...]>

1. Determine the maximum copies for any book sold between 1950 and 1999

irb(main):027:0> Book.where(year: 1950..1999).maximum(:copies)

(0.0ms) SELECT MAX("books"."copies") FROM "books" WHERE ("books"."year" BETW

EEN 1950 AND 1999)

=> 150

1. Determine the average copies for books sold between 2000 and 2010 (in readable format)

irb(main):016:0> Book.where(year: 2000..2010).average(:copies).to\_s

(0.0ms) SELECT AVG("books"."copies") FROM "books" WHERE ("books"."year" BETW

EEN 2000 AND 2010)

=> "44.6"

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

irb(main):020:0> hobbit = Book.where(title: "The Hobbit").first

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

RDER BY "books"."id" ASC LIMIT 1 [["title", "The Hobbit"]]

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

lish", year: 1937, copies: 100, created\_at: "2015-02-04 23:38:34", updated\_at: "

2015-02-04 23:38:34">

irb(main):021:0> hobbit.copies

=> 100

irb(main):022:0> hobbit.copies = 101

=> 101

irb(main):023:0> hobbit.save

(0.0ms) begin transaction

SQL (0.0ms) UPDATE "books" SET "copies" = ?, "updated\_at" = ? WHERE "books"."

id" = ? [["copies", 101], ["updated\_at", "2015-02-05 23:41:53.155578"], ["id",

6]]

(265.2ms) commit transaction

=> true