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

      => 100
2. -View the details for book #10?
   o 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">
3. See what books were published between 1980 to 1989? (titles only)
   o 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"]
4. Do a sanitized query to count the number of books that have "the" in the title.
   o Book.where('title like ?', '%the%').count

      => 60
5. Display the books ordered by author name
   o 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"]

6. Display the books ordered by copies sold, from most to least
   o 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 Witch and the Wardrobe", "And Then There Were None", "Dream of the Red Chamber", "The 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 Prince", "The Little Prince", "The Lord of the Rings", "The Lord of the Rings", "A Tale of Two Cities", "A Tale of Two Cities"]

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

   => ["A Tale of Two Cities", "A Tale of Two Cities", "The Lord of the Rings", "The 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 Adventure", "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 Witch and the Wardrobe", "The Da Vinci Code", "The Da Vinci Code", "Think and Grow 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", "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", "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", "Charlotte'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", "Harry Potter and the Deathly Hallows", "Jonathan Livingston Seagull", "A Message to Garcia", "Sophie's World", "Flowers in the Attic", "Jonathan Livingston Seagull", "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 Can Heal Your Life", "Your Erroneous Zones", "The Late Great Planet Earth", "The Adventures 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 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 Solitude", "The Purpose Driven Life", "The Thorn Birds", "The Revolt of Mamie Stover", "The Girl with the Dragon Tattoo", "The Very Hungry Caterpillar"]

8. Display the books written in the 20th century (1900s) in English
   o Book.where(language: "English" , year: 1900..1999)

   => #<ActiveRecord::Relation [#<Book id: 2, title: "The Lord of the Rings", author: "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", year: 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", language: "English", year: 1937, copies: 100, created_at: "2015-02-04 02:15:52", updated_at: "2015-02-04 02:15:52">, #<Book id: 8, title: "The Lion the Witch and the 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 id: 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, title: "The Common Sense Book of Baby and Child Care", author: "Dr. Benjamin Spock", language: "English", year: 1946, copies: 50, created_at: "2015-02-04 02:15:52", updated_at: "2015-02-04 02:15:52">, #<Book id: 17, title: "Anne of Green Gables", author: "Lucy Maud Montgomery", language: "English", year: 1908, copies: 50, 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: "English", year: 1975, copies: 50, created_at: "2015-02-04 02:15:52", updated_at: "2015-02-04 02:15:52">, ...]>

9. Display 5 books written in the 20th century in English
   o Book.where(language: "English" , year: 1900..1999).limit(5)
   => #<ActiveRecord::Relation [#<Book id: 2, title: "The Lord of the Rings", author: "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", year: 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", language: "English", year: 1937, 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">]>

10. Display the books grouped by language
    o 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">, ...]>

11. Determine the maximum copies for any book sold between 1950 and 1999
    o Book.where(year: 1950..1999).maximum(:copies)
    => 150

12. Determine the average copies for books sold between 2000 and 2010 (in readable format)
    o Book.where(year: 2000..2010).average(:copies).to_s
    => "44.6"

13. 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>
```