

# Ruby On Rails - Models, ActiveRecord, & ActiveRelations

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## 1 Theory

- *active record*: Design pattern for relational databases.
- *ActiveRecord*: Rails implementation of active record pattern.
- Retrieve and manipulate data as objects, not as static rows.
- *Active Relations*: ORMs

## 2 Basic commands

- New app

```
rails new <app> [-d [mysql]]
```
- New controller

```
rails generate controller <controller_name> <view> <view> ..
```
- New model

```
rails generate model <model-name-in-camelcase>
```
- Dump database schema

```
rake db:schema:dump
```
- Rake – ruby make
  - List all tasks

```
rake -T
```
  - List task related to db

```
rake -T db
```
  - dump dev/prod database schema

```
rake db:schema:dump RAILS_ENV=production
rake db:schema:dump RAILS_ENV=development
```
  - Migrations

```
rails generate migration <migrations-name>
```
  - create table

```
rails generate model <name>
```
  - run migration(default will be on development)

```
rake db:migrate
```
  - drop migration(to VERSION=0, before any migrations were ran)

```
rake db:migrate VERSION=0
```

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– Migration status

```
$ rake db:migrate:status
```

```
database: /home/psachin/course/ror-yt/simple_cms/db/development.sqlite3
```

Status	Migration ID	Migration Name
down	20160622121918	Do nothing yet
down	20160622122201	Create users

– run migrations with versions

```
1 $ rake db:migrate VERSION=20160622121918
2 == 20160622121918 DoNothingYet: migrating =====
3 == 20160622121918 DoNothingYet: migrated (0.0000s) =====
4
5 $ rake db:migrate VERSION=20160622122201
6 == 20160622122201 CreateUsers: migrating =====
7 -- create_table(:users)
8 -> 0.0009s
9 == 20160622122201 CreateUsers: migrated (0.0009s) =====
10
11 $ rake db:migrate:down VERSION=20160622121918
12 == 20160622121918 DoNothingYet: reverting =====
13 == 20160622121918 DoNothingYet: reverted (0.0000s) =====
14
15 $ rake db:migrate:status
16 database: /home/psachin/course/ror-yt/simple_cms/db/development.sqlite3
17
18 Status Migration ID Migration Name
19 -----
20 down 20160622121918 Do nothing yet
21 up 20160622122201 Create users
```

### 3 Active Records

- Rails console

```
1 subject = Subject.new
2 # Check if the record exist in db or not(new record)
3 subject.new_record? # true
4
5 # Create new record
6 eng = Subject.new(:name => "Eng", :position => 1, :visible => true)
7 eng.save
8 eng.new_record? # false
9
10 # Create new inst, add values, and save
11 math = Subject.create(:name => "Math", :position => 2)
12
13 # find by id
14 find_math = Subject.find(1)
15 find_math.name = "English"
16 find_math.save
17
18 # Update multiple atts
19 find_math.updated_attribute(:name => "Maths", :visible => true)
20
21 # Delete a record
22 find_math.destroy
23
```

```

24 visible_subjects = s = Subject.where(:visible => true)
25 visible_subjects.class           # type
26 visible_subjects.to_sql         # SQL query
27
28 Subject.where(:visible => true).where(:position => 1)
29 Subject.where(:visible => true, :position => 1).first.name
30
31 # ASCending order
32 Subject.where(:visible => true).order("position ASC")
33
34 # DESCending order, limited to one entry
35 Subject.where(:visible => true).order("position DESC").limit(1).offset(1)

```

- Named scopes

```

1 class Subject < ActiveRecord::Base
2
3   # Similar to model manager in Django
4   scope :visible, lambda { where(:visible => true)}
5   scope :invisible, lambda { where(:visible => false)}
6
7   scope :sorted, lambda { order("subjects.position ASC")}
8   scope :newest_first, lambda { order("subjects.created_at DESC")}
9
10  scope :search, lambda {|query|
11    where(["name LIKE ?", "%#{query}%"])
12  }
13 end

```

– Queries

```

1 Subject.visible
2 Subject.newest_first
3 Subject.search("Math")

```

## 4 Links

- [Youtube](#)