In this lecture, we will discuss...

- ♦ Many-to-Many association
- ♦ Models and Migrations for a Many-to-Many



Many-to-Many Association

- ♦ One person can have many hobbies
- ♦ One hobby can be shared by many people
- habtm (has_and_belongs_to_many)
- Need to create an extra (a.k.a. join) table (without a model, i.e. just a migration)

Convention: Plural model names separated by an underscore in <u>alphabetical</u> order



Hobbies and Hobbies_People

```
~/advanced_ar$ rails g model hobby name
     invoke active_record
               db/migrate/20150922154738_create_hobbies.rb
     create
     create
              app/models/hobby.rb
     invoke
              test unit
     create
                 test/models/hobby_test.rb
                 test/fixtures/hobbies.yml
     create
~/advanced_ar$ rails g migration create_hobbies_people person:references hobby:references
     invoke active_record
               db/migrate/20150922154813_create_hobbies_people.rb
     create
```



Hobbies_People Migration

```
FOLDERS
▶ ☐ app
  ▶ ( ¬ bin
  ▶ ( ) config
  ▼ 🗁 db
   (a) 20150908214851 create people.rb
        3 20150908221446_add_login_pass_to_people
        20150908232650_create_personal infos.rb
        3 20150922141356_create_jobs.rb
        (A) 20150922154738 create hobbies.rb
        20150922154813_create_hobbies_people.rb
```

```
class CreateHobbiesPeople < ActiveRecord::Migration
def change
    create_table :hobbies_people, id: false do |t|
    t.references :person, index: true, foreign_key: true
    t.references :hobby, index: true
end
end
end
end
end</pre>
```

No need for primary key, since this is a join table

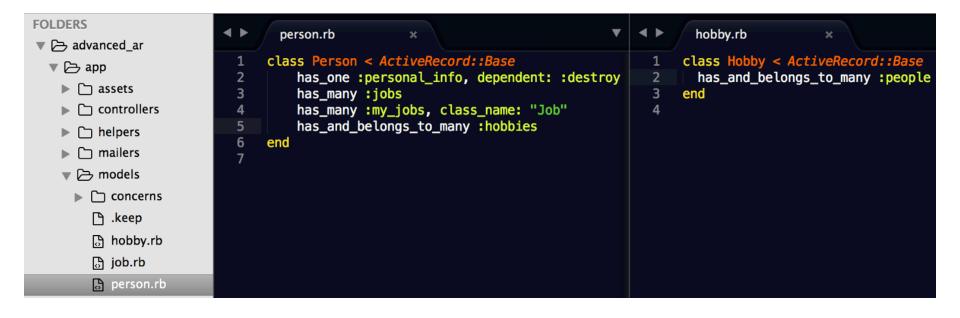


Many-to-Many in the DB

```
~/advanced_ar$ rails db
SQLite version 3.8.5 2014-08-15 22:37:57
Enter ".help" for usage hints.
sqlite> .schema %hobbies%
CREATE TABLE "hobbies" ("id" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL, "name" varchar, "created_at" datetime NOT NULL, "updated_at" datetime NOT NULL);
CREATE TABLE "hobbies_people" ("person_id" integer, "hobby_id" integer);
CREATE INDEX "index_hobbies_people_on_person_id" ON "hobbies_people" ("person_id");
CREATE INDEX "index_hobbies_people_on_hobby_id" ON "hobbies_people" ("hobby_id");
```



Person and Hobby Models





Person and Hobby in Action



Summary

- Many-to-Many contains 2 models and 3 migrations
- Join table needs to only exist in the DB, but not in Ruby code

What's Next?

♦ Rich Many-to-Many association

