



BEWD Associations

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AGENDA

- » Discovering Associations
 - » Twitter Associations [Code-Along]
 - » Netflix Associations [Exercise]
- » Building Associations
 - » Rewsly Associations [Code-Along]

ASSOCIATION

- » As the data we want to store in each table grows, sometimes we need more than just attributes
- » For example, if we want to store the user who wrote a story, we could start by storing the *user_name* as an attribute on a story
- » Then we'd add *user_email*, *user_nickname*, etc... and it would quickly get messy

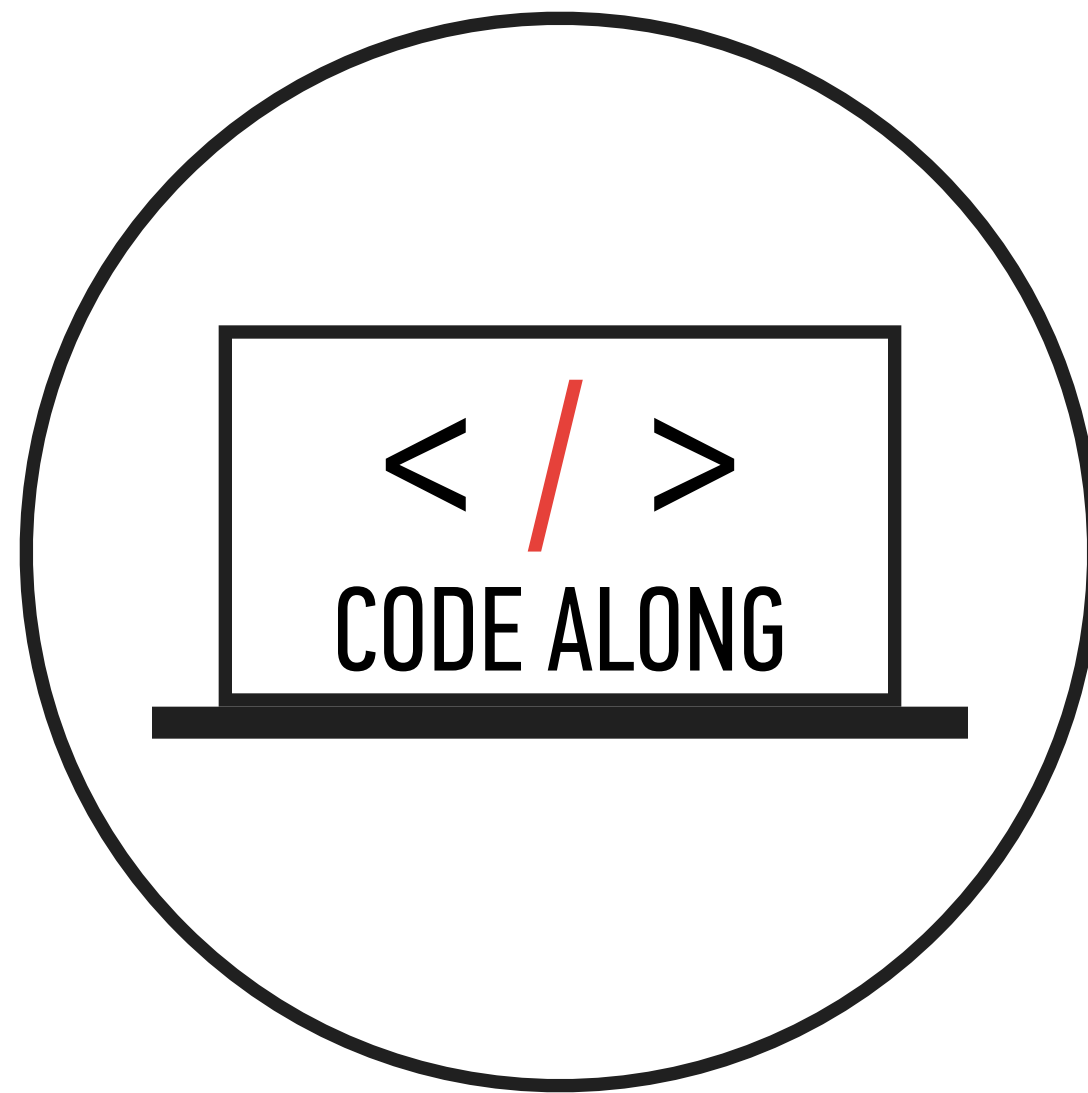
ASSOCIATION

- » Eventually we realise, we actually want to store user data in a *users* table
- » Somehow, we'd need to link each story to its corresponding record in the users table
- » This link is known as an *association*

ASSOCIATION

DEFINITION

- » Model associations are how models interact with each other.
- » Adding associations will help us know which user posted which story.
- » With associations its best to step away from the code and understand conceptually what is happening at a database level.
- » In the database, two tables can be linked together using a *foreign key*.



Twitter Associations

ASSOCIATION

PRIMARY KEY

» A unique key (*field*) that can uniquely identify each row in a table

ASSOCIATION

FOREIGN KEY

- » A foreign key is a *column* that is used to establish and enforce a link between data from two distinct tables.

ASSOCIATION

RAILS ACTIVE RECORD ASSOCIATIONS

Rails supports several types of associations to make modelling data in our applications easy.

- » **belongs_to**
- » **has_many**
- » **has_many :through**
- » has_one
- » has_one :through
- » has_and_belongs_to_many

We will cover the bolded associations.

ASSOCIATION

User has_many Tweets
Tweet belongs_to User

User

ID	Handle	Name	Email
1	@GA	General Assembly	ga@generalassemb.ly
2	@justinbieber	Justin Bieber	jb@thebiebs.com
3	@techCofounder	Some Guy	someguy@yahoo.com

Tweet

ID	Content	user_id
1	Rails 4.0 is here: http://weblog.rubyonrails.org/2013/6/25/Rails-4-0-final/ ... #rubyonrails	1
2	"Success consists of going from failure to failure without loss of enthusiasm." - Winston Churchill	1
3	Great way to end it in Vegas. Denver your next. Just a quick 15 hour bus ride first. Damn! Lol . #tourlife #Believetour	2
4	Get off Twitter, get out in the world. Meet with three top VCs over coffee and get your mind buzzing: http://ga.co/gW	1
5	got sent this from last night. pretty incredible you guys printed out all those signs for that moment. Thank u. pic.twitter.com/XdLSdLfWTB	2
6	Looking for a passionate #rubyonrails developer wishing cofound a new project, related to @Sinouts Follow and message me! Please RT!	3

■ Primary Key

■ Foreign Key

ASSOCIATION

Tweet has_many hash_tags
through hash_tagging

Tweet

ID	Content	user_id
1	Rails 4.0 is here: http://weblog.rubyonrails.org/2013/6/25/Rails-4-0-final/ ... #rubyonrails	1
2	"Success consists of going from failure to failure without loss of enthusiasm." - Winston Churchill	1
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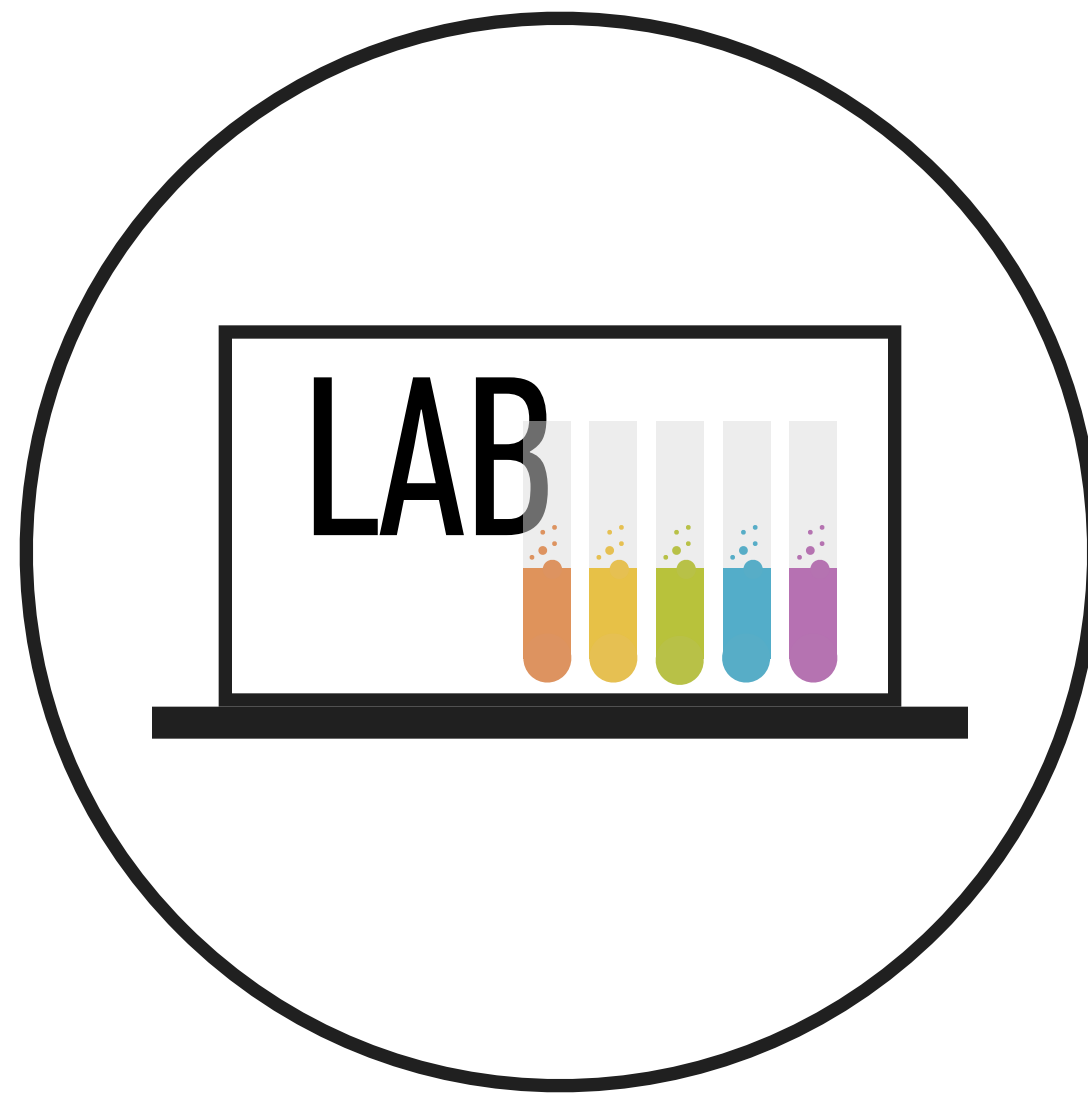
Primary Key
Foreign Key

Hashtag

ID	Hashtag
1	rubyonrails
2	tourlife
3	Believetour

Hash_tagging

ID	Hashtag_id	Tweet_id
1	1	1
2	2	3
3	3	3
4	1	6



Netflix Associations

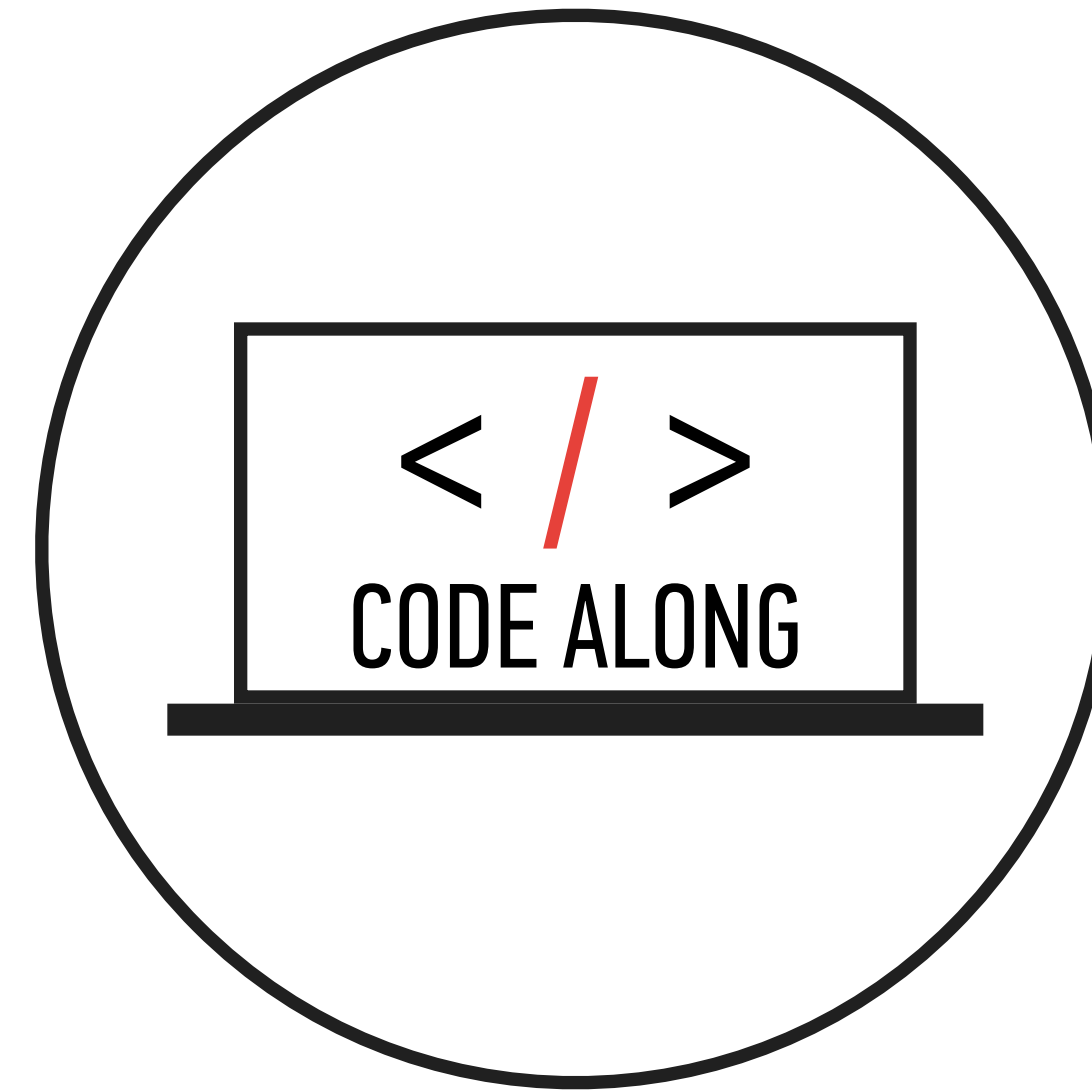
ASSOCIATION

CODING ASSOCIATIONS

Now that we know how to identify associations, lets see how to add them in code.

Rewsly

- » Stories must be associated to users.
- » Users can comment on stories.



HOMework

Project Milestone:

- * List all models needed for your final project.
- * Draw a diagram to show how they will be associated.

RESOURCES

TIPS, TRICKS & ADVANCED READING

Implementing users and followers relationship

http://blog.teamtreehouse.com/what-is-a-has_many-through-association-in-ruby-on-rails-treehouse-quick-tip

Rails Naming Conventions

<http://itsignals.cascadia.com.au/?p=7>

What's The Difference Between *has_one* and *belongs_to*

<http://requiremind.com/differences-between-has-one-and-belongs-to-in-ruby-on-rails/>

Advanced Rails Forms and nested attributes (tutorial)

<http://rubysource.com/complex-rails-forms-with-nested-attributes/>

<http://api.rubyonrails.org/classes/ActiveRecord/NestedAttributes/ClassMethods.html>

RESOURCES

STILL FEEL LOST?

Rails Tutorial, Michael Hartl - Chapter 10

http://www.railstutorial.org/book/user_microposts#top

Associations Tutorial

<http://net.tutsplus.com/tutorials/ruby/active-record-the-rails-database-bridge/>

Rails Guides - Associations

http://guides.rubyonrails.org/association_basics.html

Differences in primary and foreign keys

<http://www.programmerinterview.com/index.php/database-sql/differences-between-primary-and-foreign-keys/> Primary and Foreign keys