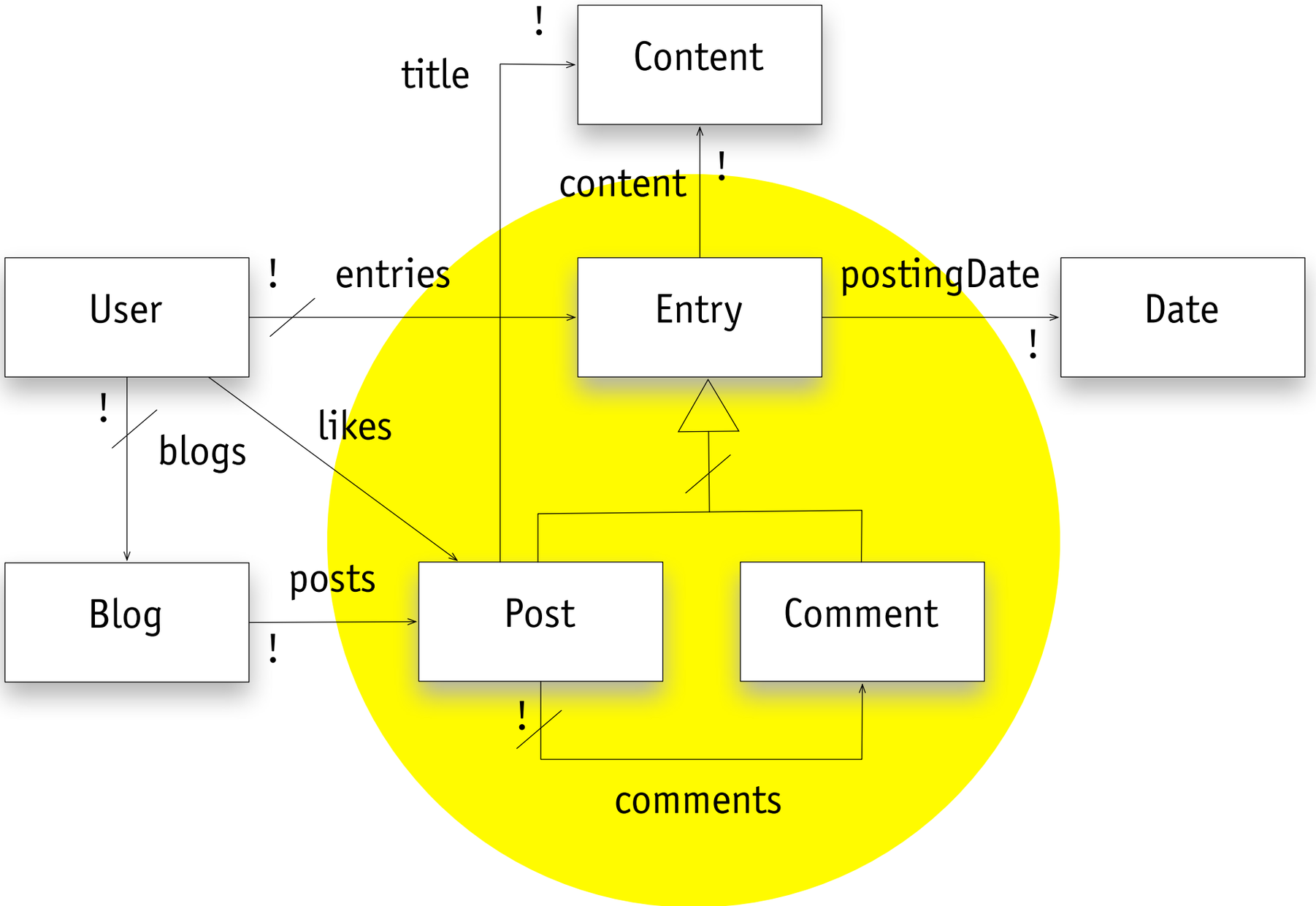
software studio

# implementing generalization

Daniel Jackson

# generalization



# option A: two classes

approach

› undo the generalization

› replicate associations

```
class User < ActiveRecord::Base
  has_many :posts
  has_many :comments
end
class Post < ActiveRecord::Base
  belongs_to :user
  has_many :comments
end
class Comment < ActiveRecord::Base
  belongs_to :user
  belongs_to :post
end
```

# option B: one class

approach

- merge two classes into one
- some fields will become optional

```
class User < ActiveRecord::Base
  has_many :entries
end
class Entry < ActiveRecord::Base
  belongs_to :user
  has_many :comments :class_name => "Entry"
end
class CreateEntries < ActiveRecord::Migration
 def up
   create_table :entries do |t|
     t.boolean :is_post
     t.references :user
     t.text :content
   end
 end
```

# option C: single table inheritance

**approach**

- single table, but three model classes
- special column in table assigns object to class
- Rails will automatically handle mapping from classes to table

```
rails generate scaffold Entry type:string
```

```
class Entry < ActiveRecord::Base
  belongs_to :user
end
class Post < Entry
class Comment < Entry
```

## for more info

- http://www.martinfowler.com/eaaCatalog/singleTableInheritance.html
- http://railsforum.com/viewtopic.php?id=3815
- http://www.therailworld.com/posts/18-Single-Table-Inheritance-with-Rails
- http://code.alexreisner.com/articles/single-table-inheritance-in-rails.html

# option D: polymorphic association

**consider** relation content: Entry -> Content

**approach**

› two classes, but one association carrying type of target

```
class Content < ActiveRecord::Base
  belongs_to :entry, :polymorphic => true
end
class Post < ActiveRecord::Base
  has_one :content, :as => :entry
end
class Comment < ActiveRecord::Base
  has_one :content, :as => :entry
end
class CreateContents < ActiveRecord::Migration
 def change
   create_table :contents do |t|
     t.string :text
     t.references :entry, :polymorphic => true
   end
 end
end
```

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