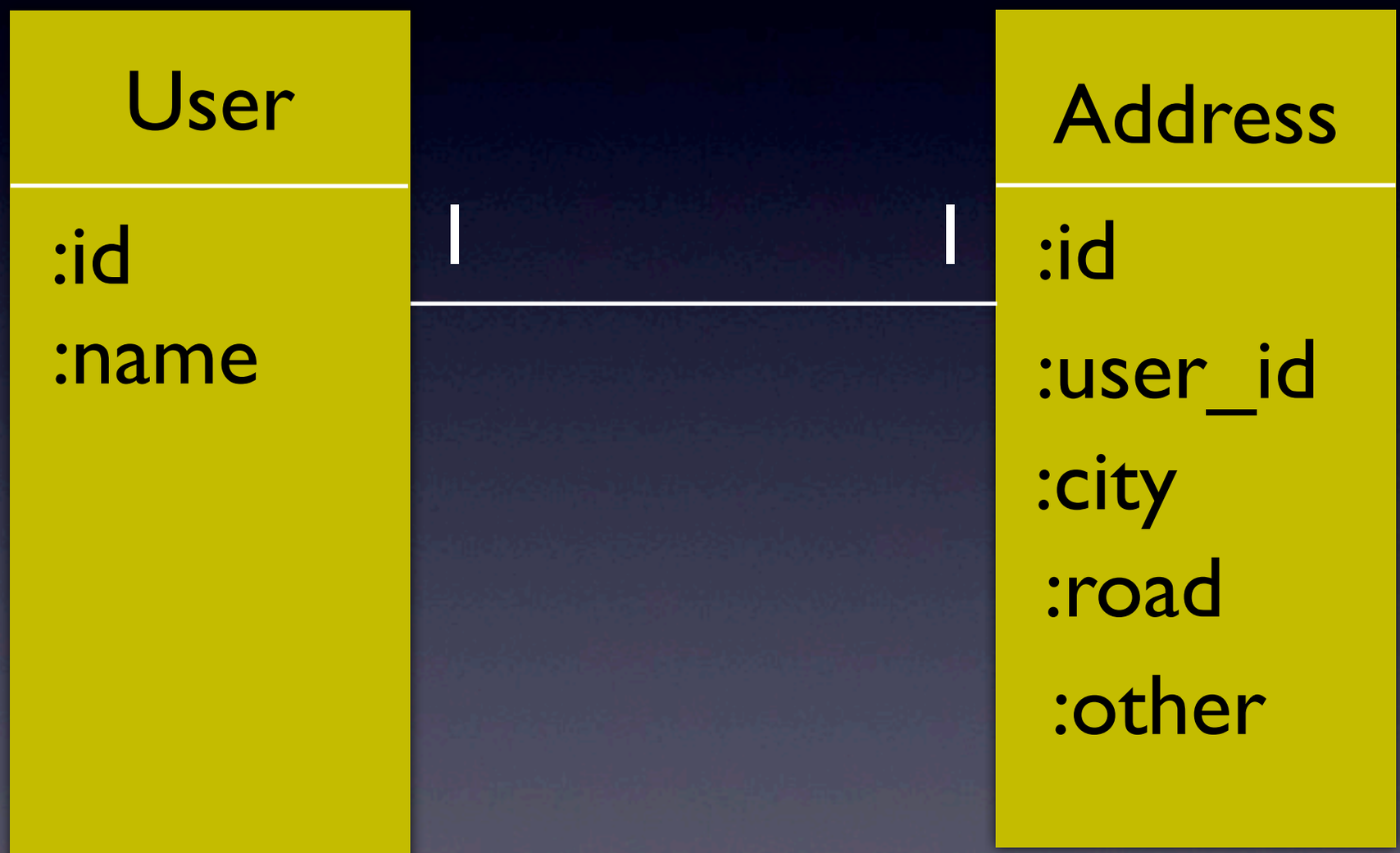
Model Association

Association

- ActiveRecord可以用Associations來定義資料表之間的關聯性。
- 資料表之間的關聯性共有三種：
  - one-to-one
  - one-to-many
  - many-to-many

One-to-One (1)



One-to-One (II)

```
class User < ActiveRecord::Base
    has_one :address
    #...
end
```

- 預設是使用Address這個model。
- address為單數。

One-to-One (III)

```
class Address < ActiveRecord::Base
    belongs_to :user
    #...
end
```

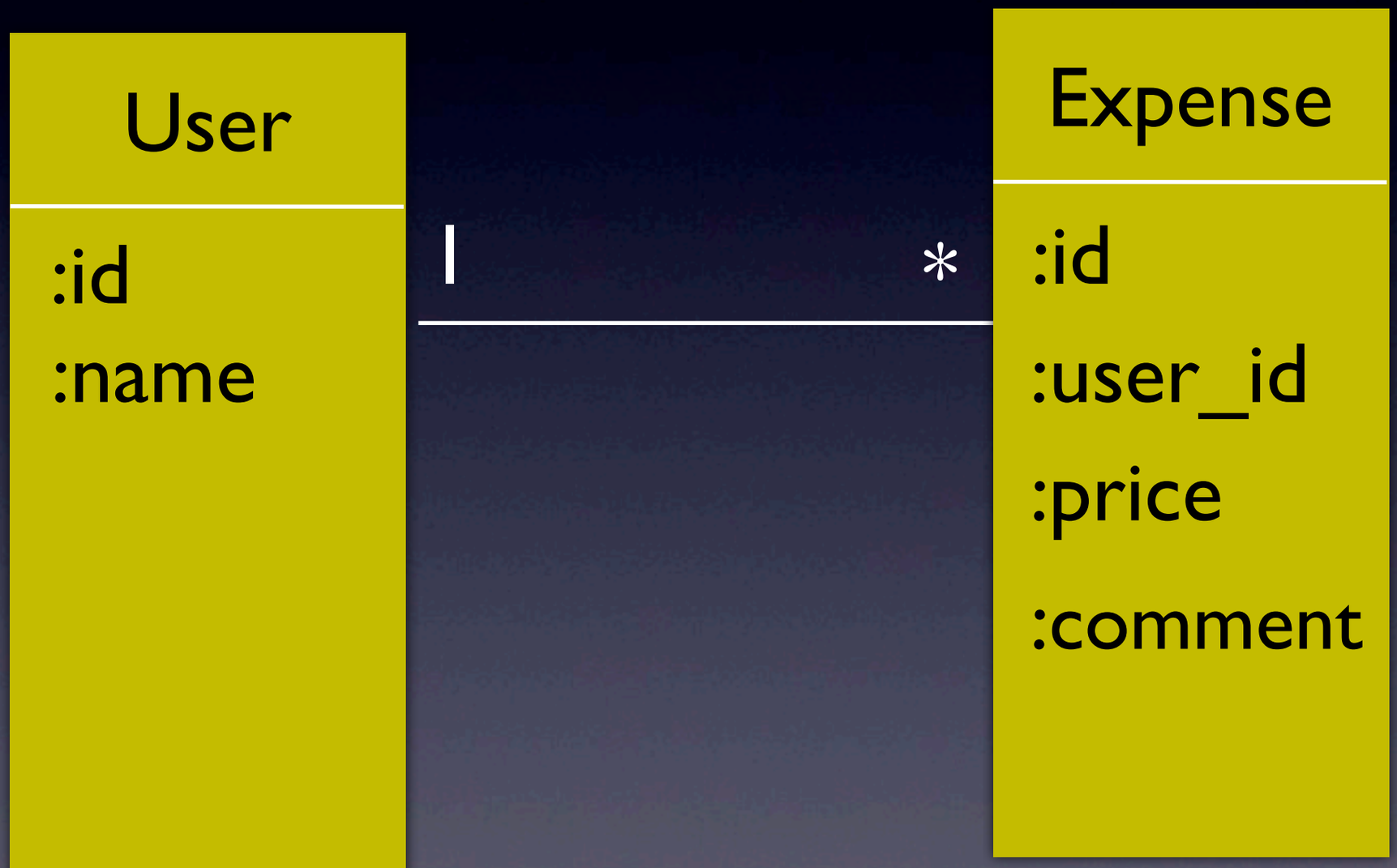
- 預設是使用User這個model。
- 預設有user_id當做foreign key。
- user為單數。

小練習

- 建立一個app，來實作User - Address的關係。
- 利用Rails console來檢驗是否正確。

```
u = User.create(:name => 'weijen')
addr = u.address.new(:city=>"HsinChu",
                     :road => "Zhonghua",
                     :other => "No.53")
addr.save
p addr
p addr.user
```

One-to-Many (I)



One-to-Many (II)

```
class User < ActiveRecord::Base
    has_many :expenses
    #...
end
```

- 預設使用Expense這個model。
- expenses為複數。

One-to-Many (III)

```
class Expense < ActiveRecord::Base
    belongs_to :user
    #...
end
```

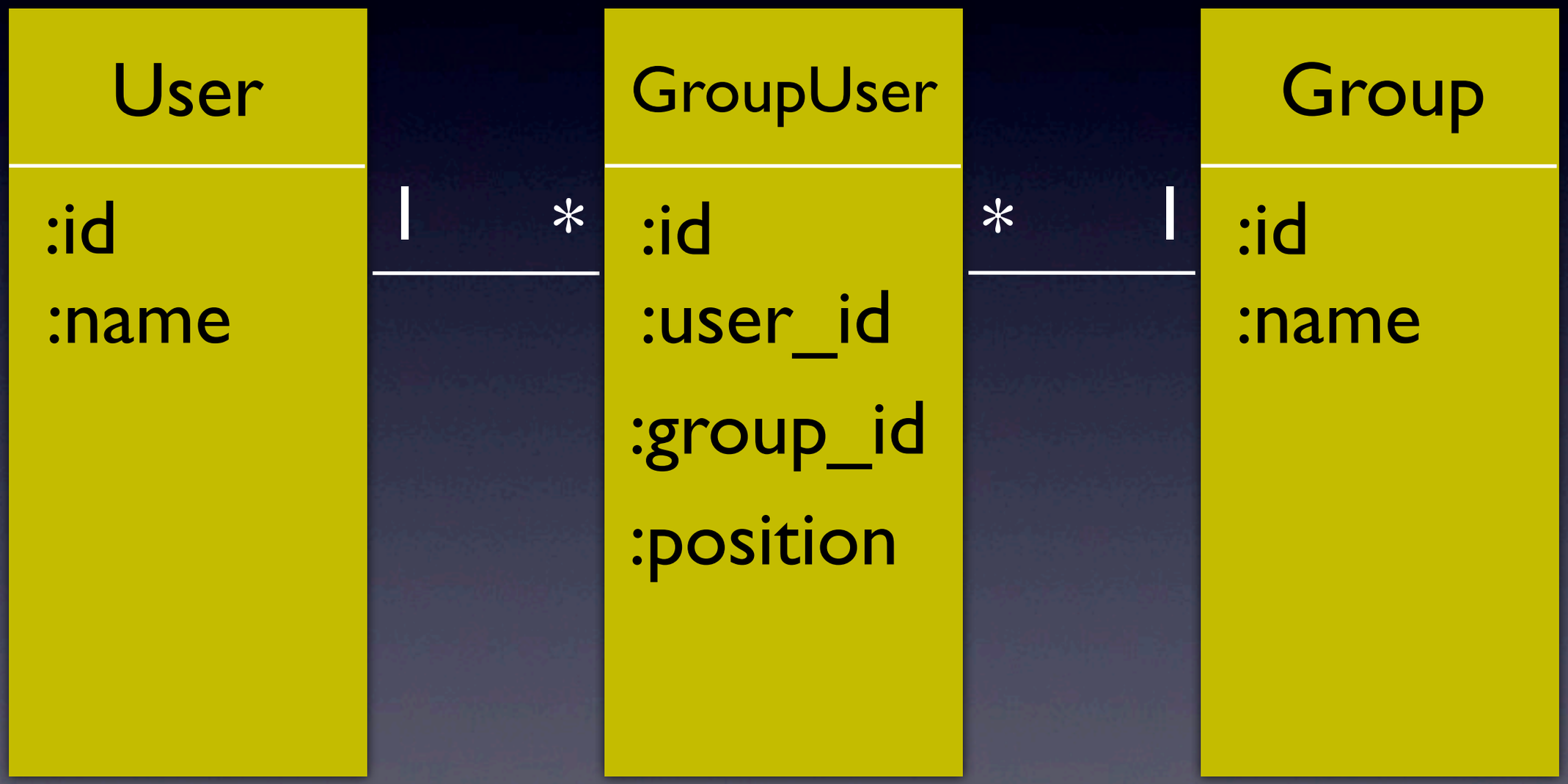
- 預設是使用User這個model。
- 預設有user_id當做foreign key。
- user為單數。

小練習

- 實作User - Expense的關係。
- 利用Rails console來檢驗是否正確。

```
u = User.first
expense = u.expenses.new(price: 100,
                         comment: "test comment")
expense.save
p expense
p expense.user
```

Many-to-Many (I)



Many-to-Many (II)

```
class Group < ActiveRecord::Base
    has_many :group_users
    has_many :users, :through => :group_users
end
```

```
class User < ActiveRecord::Base
    has_many :group_users
    has_many :groups, :through => :group_users
end
```

- 透過GroupUser來使User跟Group有many-to-many的關係

Many-to-Many (III)

```
class GroupUser < ActiveRecord::Base
    belongs_to :group
    belongs_to :user
end
```

- 同時屬於Group 與 User model
- 預設有group_id與user_id
- 都是使用單數

小練習 (I)

- 實作Group-GroupUser-User的關係。
- 利用Rails console來檢驗是否正確。

```
u = User.first
g1 = Group.create(:name => "group1")
u.groups < g1

g2 = u.groups.create(:name => "group2")
```

參數 (I)

- class_name: 變更關聯的類別名稱
- foreign_key: 變更Foreign Key的欄位名稱

```
class Group < ActiveRecord::Base
    belongs_to :owner,
               :class_name => "User",
               :foreign_key => "owner_id"
end
```

參數 (II)

- has_many可以利用Proc來指定順序等。

```
class User < ActiveRecord::Base
    has_many :groups,
                -> { order("id DESC") }
end
```

參數 (III)

- dependent：當物件刪除時，也會順便刪除它的has_many物件。
- 有三種不同的刪除方式：
  - :destroy：會執行destroy回呼
  - :delete：　不會執行destroy回呼
  - :nullify：　這是預設值，不會幫忙刪除

參數 (IV)

```
class User < ActiveRecord::Base
    has_many :expenses, :dependent => :destroy
    #...
end
```