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## Classes

The basis of User interaction revolves around three main classes: forum, post and reply (all of which inherit from the ApplicationRecord).

**forum** – Each instance of a forum has an id and a forum\_subject. Forum access is mediated by the forums\_controller.

**post** – Each instance has a content and a title and is linked to a forum. Post access is mediated by the posts\_controller.

**reply** – Each instance has a content and is linked to an associated post. Reply access is mediated by the replies\_controller.

## Controllers

Access to the above classes is moderated by three controllers: forums\_controller, post\_controller and replies\_controller (all of which inherit from the ApplicationController).

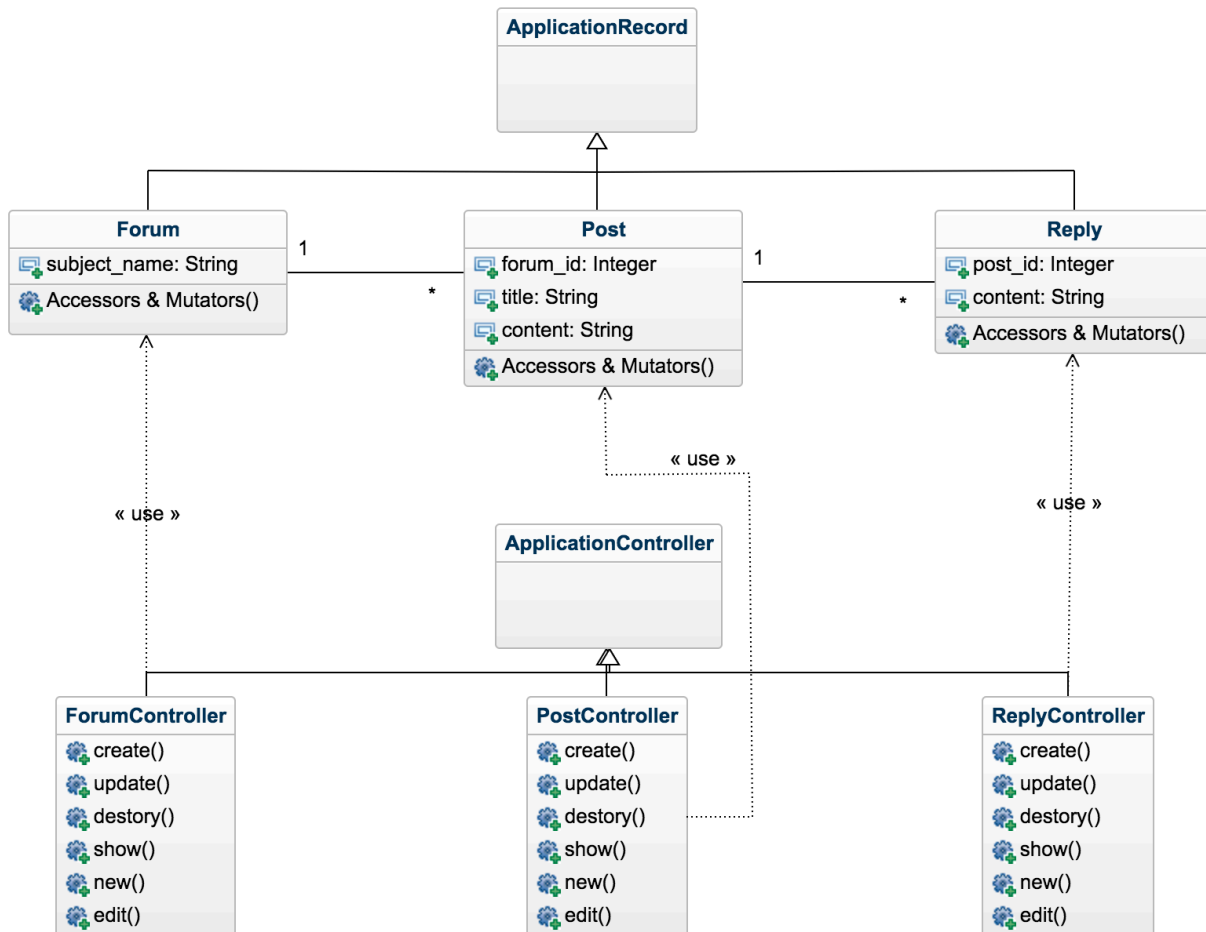
**forum\_controller** – Given a subject\_name, the forum\_controller will use the necessary CRUD operation to create an instance of the forum class.

**post\_controller** – Given a title, content and the forum\_id of an existing forum instance, the post\_controller will call upon the proper CRUD operation to create a new instance of the post class.

**replies\_controller** – Given a content and the post\_id of an existing post instance, the replies\_controller will create an instance of the reply class.

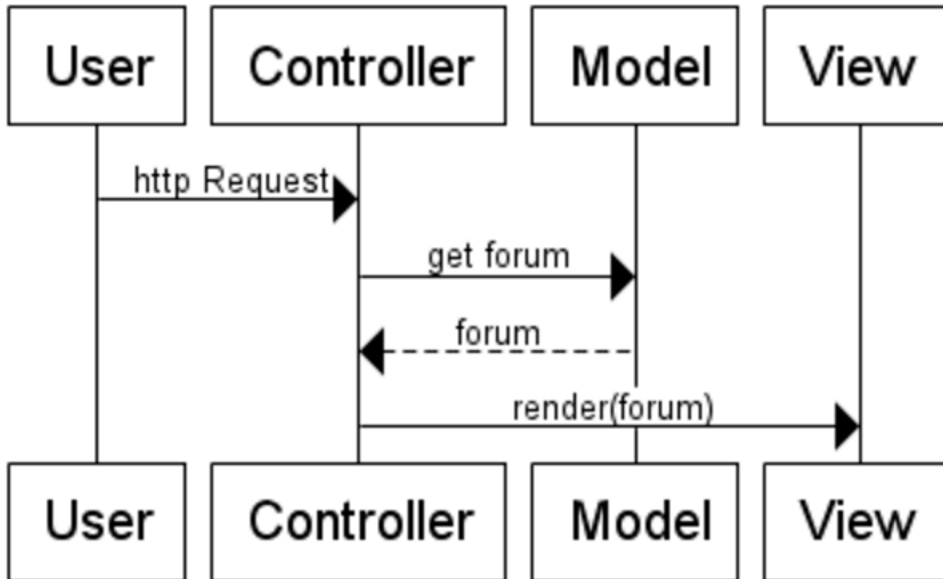
In addition, all the above controllers have CRUD operations to the modify and delete entity instances (update and destroy respectively).

## Class Diagram

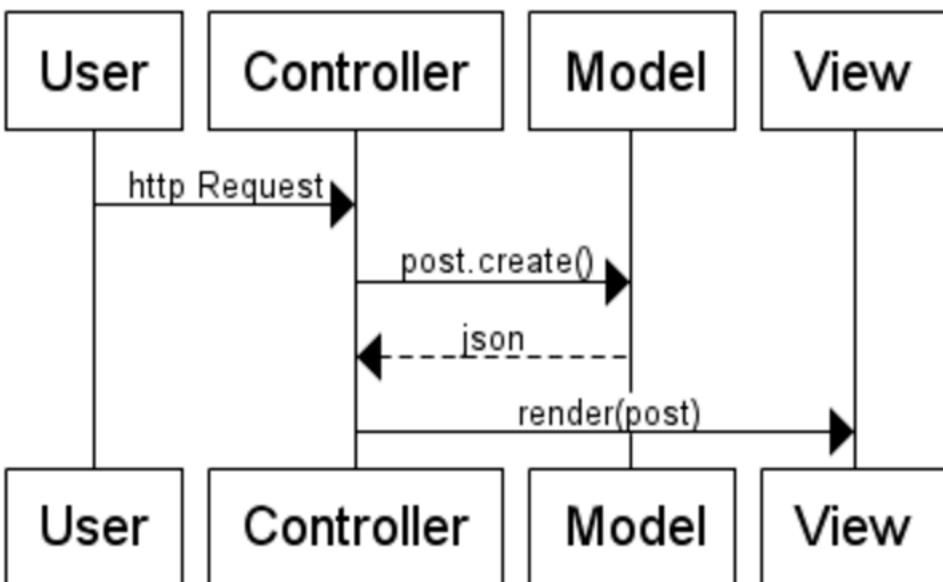


## Sequence Diagrams

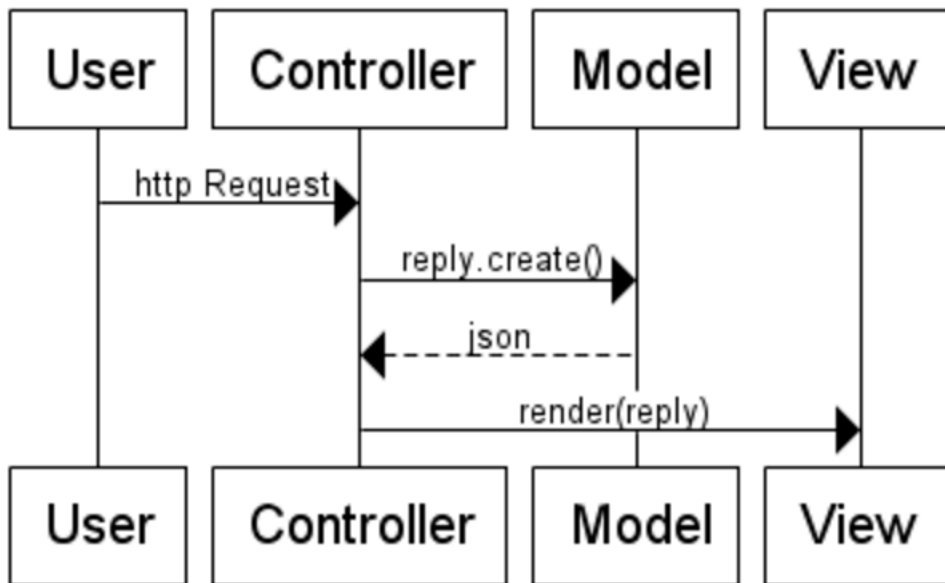
### 1. View Forum



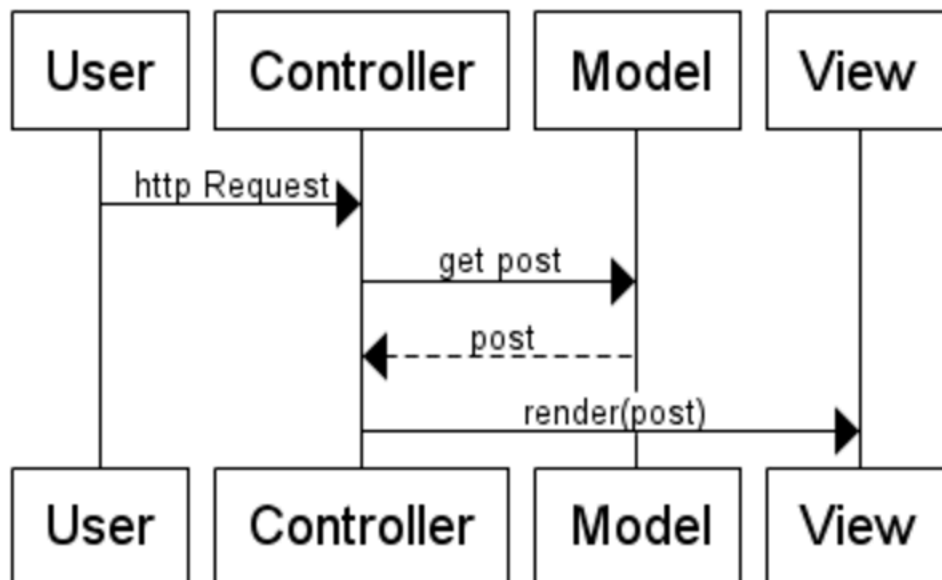
### 2. Ask Question



### 3. Answer Question



### 4. View Thread



## Database

Tables:

Forum (corresponds to the forum model):

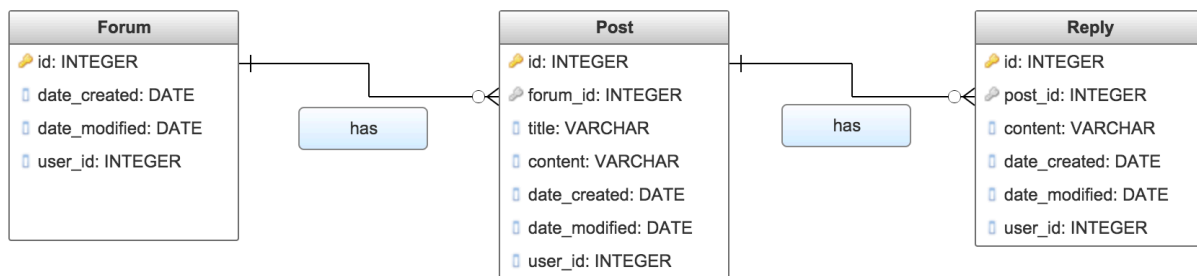
- id: integer
- date\_created
- date\_modified

Post (corresponds to the post model):

- id: integer
- forum\_id: integer FK
- title: string
- content: string
- date\_created
- date\_modified

Reply (corresponds to the reply model):

- id: integer
- content: string
- date\_created
- date\_modified



Forum has 0...\* Post entities associated to it. forum\_id is a foreign key in the Post table.

Post has 0...\* Reply entities associated to it. post\_id is a foreign key in the Reply table.

## Rails Console Commands

```
Forum.create(subject: "subject name")
```

```
Post.create(forum_id: "forum_id", title: "title", content: "content")
```

```
Reply.create(post_id: "post_id", content: "content")
```

