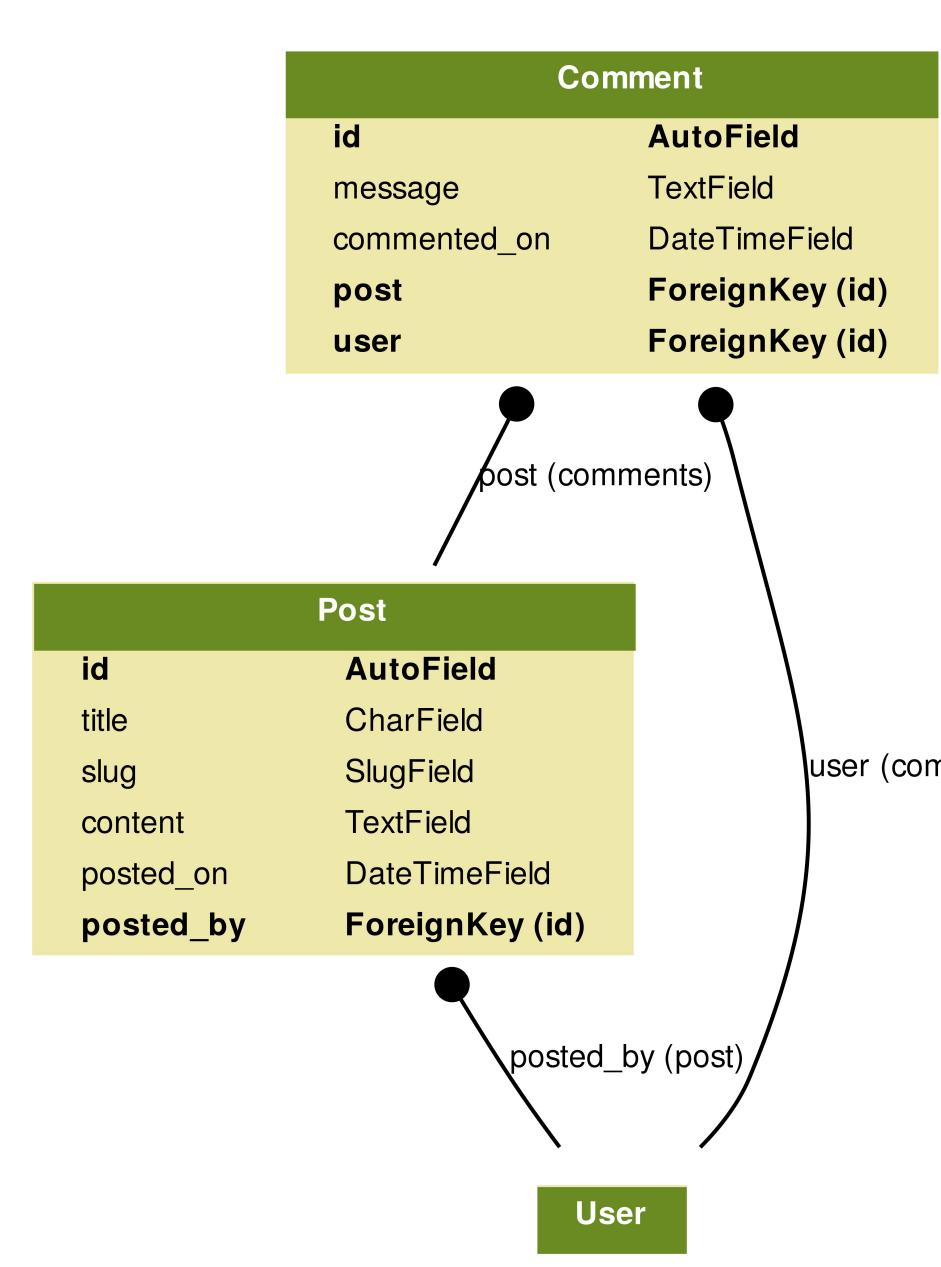


# Simple "Model" Driven RESTful APIs

Using Django and django REST framework to create a autodocumented API with swagger



## Django-Model: Example Mini-Blog

models.py

```
class Comment(models.Model):
    message = models.TextField(verbose_name=_("message"))
    commented_on = models.DateTimeField(verbose_name=_("post date"))
    post = models.ForeignKey(Post, related_name='comments', verbose_name=_("post"))
    user = models.ForeignKey(settings.AUTH_USER_MODEL, verbose_name=_('user'), related_name='comment_user')

class Post(models.Model):
    title = models.CharField(max_length=200, verbose_name=_("title"))
    slug = models.SlugField()
    content = models.TextField(verbose_name=_("content"))
    posted_on = models.DateTimeField(verbose_name=_("post date"))
    posted_by = models.ForeignKey(settings.AUTH_USER_MODEL, verbose_name=_("posted by"))
```



## View: Python docstrings are transformed to "swagger"

views.py

```
class UserViewSet(viewsets.ReadOnlyModelViewSet):
    """
    This endpoint presents the users in the system.

    list:
    List all the users. As you can see, the users posts are hyperlinked.

    retrieve:
    Retrieve a single user. As you can see, the the user's posts are hyperlinked.
    """
    queryset = User.objects.all()
    serializer_class = UserSerializer

    class PostViewSet(viewsets.ModelViewSet):
        """
        This endpoint presents the posts in the system.

        list: List all the posts.

        retrieve: Fetch a single post entry.

        create: Create a new blog post.

        Slug is a unique identifier...
        Username and the time the post has been created are automatically added.

        update: Update the entire post.

        Details for updating...

        partial_update: Partially update the post.

        destroy: Delete a blog post.
        """
        queryset = Post.objects.all()
        serializer_class = PostSerializer

        def perform_create(self, serializer):
            now = timezone.now()
            serializer.save(posted_by=self.request.user, posted_on=now)

    class CommentViewSet(viewsets.ModelViewSet):
        """
        This endpoint presents the comments in the system.

        list: List all the comments.

        retrieve: Fetch a single comment entry.

        create: Create a new comment post.

        update: Update the entire comment.

        partial_update: Partially update the comment.

        destroy: Delete a comment.
        """
        queryset = Comment.objects.all()
        serializer_class = CommentSerializer

        def perform_create(self, serializer):
            now = timezone.now()
            serializer.save(user=self.request.user, commented_on=now)
```



## Serializer: Layer between model and view

serializers.py

```
class UserSerializer(serializers.HyperlinkedModelSerializer):
    posts = serializers.HyperlinkedRelatedField(queryset=Post.objects.all(), view_name='post-detail', many=True)

    class Meta:
        model = User
        fields = ('username', 'posts')

class PostSerializer(serializers.HyperlinkedModelSerializer):
    comments = serializers.HyperlinkedRelatedField(view_name='comment-detail', many=True, read_only=True)
    posted_by = serializers.ReadOnlyField()
    posted_on = serializers.ReadOnlyField()

    class Meta:
        model = Post
        fields = ('title', 'slug', 'content', 'posted_on', 'posted_by', 'comments')

    class CommentSerializer(serializers.ModelSerializer):
        user = serializers.ReadOnlyField()
        commented_on = serializers.ReadOnlyField()

        class Meta:
            model = Comment
            fields = ('message', 'commented_on', 'post', 'user')
```



<https://mdd.hixi.ch/docs/>

The screenshot shows the Swagger UI interface for the "Example Mini-Blog API". It includes sections for "comments", "posts", and "users", each with detailed documentation for GET, POST, PUT, PATCH, and DELETE methods, including descriptions, examples, and parameter definitions. A specific example for the "POST /api/posts/" endpoint is highlighted, showing the "Implementation Notes" (Create a new blog post. Slug is a unique identifier... Username and the time the post has been created are automatically added.), parameters (data), and response messages (HTTP 201 status code with "Try it out!" button).