

Lab 12: Django Models

In this lab, we will create the django models required to build a mini social networking website that will let users to follow/friend other users.

1. Create a new app inside the **django-testapp** directory. Let's call this new app **my_social_network**.
What command should you use to create this new app? (Hint: Look in the django documentation at <https://docs.djangoproject.com/en/1.3/ref/django-admin> if you are not sure.)

If you successfully created the `my_social_network` app, you should see the following file structure in `django-testapp`:

```
my_social_network
├──
│   ├── __init__.py
│   ├── models.py
│   ├── tests.py
│   └── views.py
```

2. All social networks have users. Luckily for us, we do not have to create users from scratch. There's very good built in support in django for users. Read the documentation at: <https://docs.djangoproject.com/en/1.3/topics/auth/#overview> to learn more about the User model in django. We encourage you to use this User model in your social network application.
What module do you need to import to make Users available in your code?
3. We use the `models.py` file to define the relationships between our Users. The very basic relationship in a social network is 'follow'/'friend' relationship that signals there's a link between UserA and UserB. If you are not sure how to create a model in django refer to the documentation at: <https://docs.djangoproject.com/en/1.3/topics/db/models>
 - a. Create the model **UserLink** in `models.py`. This model should have the following fields:
 - i. `from_user`
 - ii. `to_user`
 - iii. `date_added`

- b. Add the appropriate method in the UserLink model to display the message “**UserA is following UserB**”. If you are not sure how to do this, refer to <https://docs.djangoproject.com/en/1.3/ref/models/instances/#model-instance-methods>

- c. What should happen if UserA tries to follow UserA? This doesn't make sense as people don't usually follow /friend themselves in social networks! Write code to raise an error if this were to happen in your app.
Hint: you have to override the save() method of the Model class in your **UserLink** model.
Please see <https://docs.djangoproject.com/en/dev/topics/db/models/#overriding-predefined-model-methods> to get some inspiration on how to do this.

- d. The friend relationship between the 'to_user' and 'from_user' should be unique when considered together in the data model. So, add a constraint on these two fields.
Check <https://docs.djangoproject.com/en/dev/ref/models/options> if you are not sure what meta option to use for this.

4. Checking to see if everything works:

Django has an automatically generated admin site where you can explore and add data to the data models you created. To activate and play with it, please follow the instructions at:

<https://docs.djangoproject.com/en/dev/intro/tutorial02/#activate-the-admin-site>

(This tutorial creates an app called 'polls'. Remember that the name of your app is 'my_social_network'. So, remember to change the settings appropriately.)