

# DJANGO DATABASES AND TEMPLATES

**Models & Views & Stuff**

# DJANGO USES MODELS

Models define the information your Django database will store, and the data manipulation that happens to that information when it is retrieved from the database.

# STEP 1: SETUP YOUR DATABASE

Install Postgres to your system.

Mac: Visit <http://postgresapp.com/>

Windows: Visit <http://www.postgresql.org/download/> and install

# ADD POSTGRES TO YOUR PATH (IF IT ISN'T ALREADY)

## **Mac:**

Edit `.bashrc` to add `/Applications/Postgres.app/Contents/Versions/9.4/bin` to your path

## **Windows:**

Add it to your path in your environmental variables

**You can verify it worked by running “which psql” in the terminal.**

# USE PIP3 TO INSTALL PSYCOPG2

**Mac:**

```
pip3 install psycopg2
```

**Windows:**

```
pip3 install psycopg2-windows
```

# START POSTGRES' SHELL

**run** "psql -h localhost" in the terminal

To exit this terminal, type /q, or press ctrl+D

**Password error? Try:**

```
sudo -u postgres psql
```

**Database error:**

```
$ createdb
```

```
$ psql -h localhost
```

# CREATE A NEW DATABASE

```
$ createdb poll_db
```

```
(or $ sudo -u postgres createdb poll_db)
```

```
$ psql
```

```
(or $ sudo -u postgres psql)
```

```
CREATE ROLE myusername WITH LOGIN PASSWORD 'mypassword';
```

```
GRANT ALL PRIVILEGES ON DATABASE poll_db TO myusername;
```

```
ALTER USER myusername CREATEDB;
```

**Replace “myusername” with a username you want.**

# CREATE A NEW DJANGO PROJECT

Create a new Django project called “poll\_site”

Open your settings.py file and add your DB info:



```
DATABASES = {  
    'default': {  
        'ENGINE': 'django.db.backends.postgresql_psycopg2',  
        'NAME': 'poll_db',  
        'USER': 'myusername', #The username you set  
        'PASSWORD': 'mypassword', #The password you set  
        'HOST': '',  
        'PORT': '',  
    }  
}
```

# CHECK YOUR DATABASE INSTANCE

run “python3 manage.py check”

No errors?

run “python3 manage.py migrate”

# DJANGO.DB.MODELS.MODEL

Each `Model` class should inherit from `django.db.models.Model`,

and have class variables that each represent a field in your table.

```
class Question(models.Model):  
    question_text = models.CharField(max_length=200)  
    pub_date = models.DateTimeField('date published')
```