

Software Development - Session 3

Git for collaboration

A git server

- Hosts git repositories
- Allows multiple users to push/pull changes to the repository
- Access permission for users
- Additionally, servers like github.com (bitbucket.org, gitlab) provide better UI for code reviews, pull requests etc

Create a github account

Create a new repo on github.com

In your local git repository run

```
1 git remote add origin git@github.com:sravfeyn/ps2.git
2 git remote remove origin # if you run into permission-denied error
3 git remote add origin https://github.com/<username>/<repo-name>.git
4 git push -u origin master
5 git pull origin friends_feature
```

Django

- How does a website/app work?
 - What all happens when you a search word in Google and press Enter?
 - What is server?
 - HTTP, HTTPS
 - Web frameworks

Tutorial 1

Setup virtualenv

```
1 virtualenv -p python3 sd-env
2 source sd-env/bin/activate
3 pip install Django==2.0
```

<https://docs.djangoproject.com/en/2.0/intro/tutorial01/>

Start Django project

```
1 django-admin startproject polls_site
2 cd polls_site
3 ./manage.py runserver
```

Observe the project structure and head to <http://127.0.0.1:8000/>

- Add a requirements.txt
- git commit

Add a basic view

```
./manage.py startapp polls
```

- Add a view function that takes `request` as first param and returns `HttpResponse` object.
- In the `polls/urls.py` add a `urlpatterns` to point the top page to this view.
- About `urlconf` <https://docs.djangoproject.com/en/2.0/topics/http/urls/#how-django-processes-a-request>

Tutorial 2

Add few models

```
1 from django.db import models
2
3
4 class Question(models.Model):
5     question_text = models.CharField(max_length=200)
6     pub_date = models.DateTimeField('date published')
7
8
9 class Choice(models.Model):
10    question = models.ForeignKey(Question, on_delete=models.CASCADE)
11    choice_text = models.CharField(max_length=200)
12    votes = models.IntegerField(default=0)
13
```

Add the app to INSTALLED_APPS

```
1 python manage.py makemigrations
2 python manage.py sqlmigrate polls 0001
```

Browse the admin site

```
python manage.py createsuperuser
```

Tutorial 3

Add more views and use tempaltes, demonstrate url filter,