

# Django

The web framework for perfectionists with deadlines

rami

RaumZeitLabor, Mai 2014

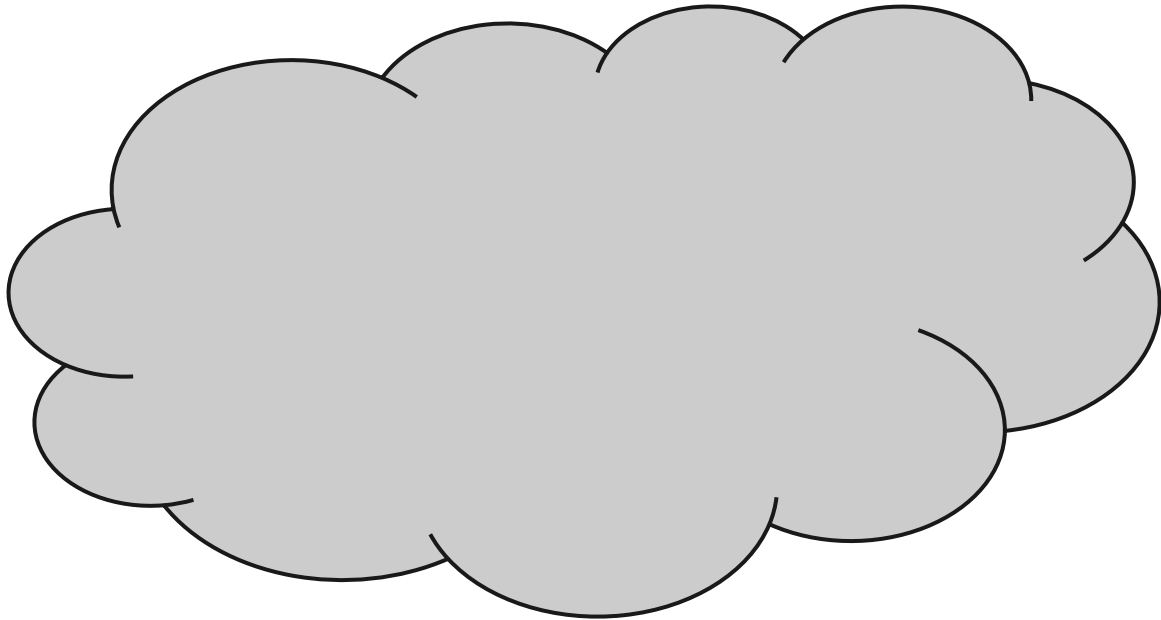
# Was ist Django?

- Python Web Framework
- Etabliert
  - unterwegs seit 2005
  - Benutzt von Disqus, Instagram, Pinterest, Mozilla und einigen großen Zeitungsverlagen
- „batteries included“

# Be warned

- Es gibt Code zu sehen
- Wer noch nie Python gesehen hat, nicht verunsichern lassen

# Das Web



# Das Web

**GET / HTTP/1.1**

User-Agent: curl/7.36.0

Host: **raumzeitlabor.de**

Accept: \*/\*

**HTTP/1.1 200 OK**

Content-Type: **text/html**

Content-Length: 258

Date: Tue, 27 May 2014 16:  
11:17 GMT

...

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**Set-Cookie:**

**sessionid=21832ASU345435AHSG**

...

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Accept: \*/\*

**Cookie:**

**sessionid=21832ASU345435AHSG**

# Das Web

```
<html>
  <head>
    <title>RaumZeitLabor</title>
  </head>
  <body>
    <h1>RaumZeitLabor</h1>
    <p>Das RaumZeitLabor ist ein Hackerspace in Mannheim.
  </p>
  </body>
</html>
```



# URL routing

```
urlpatterns = patterns(
    '',
    url(r'^$', views.index_view,
        name='index'),
    url(r'^login$', views.login,
        name='login'),
    url(r'^account$', views.account,
        name='account'),
)
```

/login → views.login

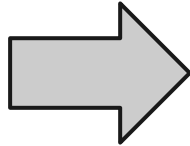
# View layer

```
def account(request):  
    if not request.user.is_authenticated():  
        return HttpResponseRedirect(  
            "You are not logged in")  
    else:  
        ...
```

# Template System

```
<ul>
{% for user in users %}
    <li>{{ user.username }}</li>
{% endif %}
</ul>
```

```
def userlist(request):
    users = get_all_users()
    return render(request,
                  'user_list.html',
                  { 'users': users, })
```



```
<ul>
    <li>admin</li>
    <li>max</li>
    <li>peter</li>
</ul>
```

# Datenbank

```
CREATE TABLE `users` (  
  `id` INTEGER(11) NOT NULL AUTO_INCREMENT,  
  `username` VARCHAR(255) NOT NULL,  
  `email` VARCHAR(255) NOT NULL,  
  `registration_date` DATETIME NOT NULL,  
  `last_activity` DATETIME NULL  
) PRIMARY KEY `id`;
```

# Datenbank

```
SELECT *  
FROM `users`  
WHERE `registration_date` >= '2014-04-05'  
ORDER by `username` ASC  
LIMIT 3
```

# Datenbank-Abstraktion

```
class User(models.Model):  
    username = models.CharField(max_length=50)  
    email = models.EmailField()  
    registration_date = models.DateTimeField()  
    last_activity = models.DateTimeField(null=True)
```

# Datenbank-Abstraktion

```
users = User.objects.all()
```

```
users = User.objects.filter(  
    registration_date__gt=datetime.datetime(2014, 4, 5)  
)  
.order_by('username')[:3]
```

# Datenbank-Abstraktion

```
try:
```

```
    user = User.objects.get(id=5)
```

```
except User.DoesNotExist:
```

```
    user = User(username='john', email='jon@example.org')
```

```
user.last_activity = now()
```

```
user.save()
```



# Bonus: Admin-Seite

**Select user to change**

Search:

Username	E-mail address	First name
071004		
078asm		
1111		
12345		
123bjamm		
123kvb		
12thstreet		
13hawk		
1891		
1977kufan		

**URL:**   
Example: '/about/contact/'. Make sure to have leading and trailing slashes.

**Title:**

**Content:**   
Full HTML is allowed.

**Sites:**   
blogs.ljworld.com  
internal.ljworld.com  
www2.kusports.com  
www2.ljworld.com  
www.6newslawrence.com  
www.6productions.com  
www.lawrence.com  
Hold down "Control", or "Command" on a Mac, to select more than one.

Advanced options  
[Show Advanced options](#)

Save and add another

Save and continue editing

Save

# Bonus

- Caching Framework
- Automatische Generierung und Validierung von HTML-Formularen
  - Dateiuploads!

# Bonus

- Apps

# Run it!

```
$ ./manage.py runserver
```

```
Validating models...
```

```
0 errors found
```

```
May 20, 2014 - 21:41:32
```

```
Django version 1.5.7, using settings 'settings'
```

```
Development server is running at http://localhost:8000/
```

```
Quit the server with CONTROL-C.
```

# Auf dem echten Webserver

- Verschiedene Wege. Der wohl aktuell eleganteste:
  - gunicorn WSGI Server
  - supervisord als Watchdog
  - Apache oder nginx als Reverse-Proxy
  - Einfach mal googlen, gibt gute Anleitungen (sprengt hier den Rahmen)

# Auf dem echten Webserver

- Kein eigener Webserver?  
→ gute Webhoster können das, z.B. [uberspace.de](https://uberspace.de)

# Los geht's

- [djangoproject.com](https://djangoproject.com)
  - nicht super einsteigerfreundlich, aber sehr hochwertige Dokumentation