Course
"Software development for start-up entrepreneurs"

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Studium Generale
WHU
Suppose your startup is into polls ...
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Suppose your startup is into polls ...
Pretty much any startup requires IT

- Websites for customers:
  - product catalog, order, tracking, …
- Integrating and exposing services through APIs
- Document management
- CRM, HRM, ERP, …
- …

The success of a startup relies quite obviously on its IT strategy and performance.
Entrepreneur ≠ Developer

- ... but they need to talk to each other effectively.
- Entrepreneurs needs to understand developers’ concepts and thought processes.
- Let’s look at software development as if we were building a start-up app.
- In order to enjoy this course, you need to have a certain interest in IT (programming, design, technologies, deployment, ...).
The basic **object model** of the Polls app

We will be using bits of UML for such design work.
The implementation of the Polls app

A database

The models

The views

Python code, HTML, and templates

Templates for views
A template for voting

The template accesses a specific poll passed as argument and renders the poll’s spec as an appropriate HTML FORM.

Source: https://docs.djangoproject.com
Technologies covered by the course

- The **Python** programming language
  - http://www.python.org/
- The **Django** web framework
  - https://www.djangoproject.com/
- The **pythonanywhere** hosting platform
  - https://www.pythonanywhere.com/
- Revision control and hosting with **GitHub** or **BitBucket**
  - https://github.com/ or https://bitbucket.org
- ... and several others in passing ...
The **Python** programming language

Python Programming Language – Official Website

Python is a programming language that lets you work more quickly and integrate your systems more effectively. You can learn to use Python and see almost immediate gains in productivity and lower maintenance costs.

Python runs on Windows, Linux/Unix, Mac OS X, and has been ported to the Java and .NET virtual machines.

Python is free to use, even for commercial products, because of its OSI-approved open source license.

New to Python or choosing between Python 2 and Python 3? Read [Python 2 or Python 3](http://www.python.org/doc/2.7/faq/tutorial.html).

The [Python Software Foundation](http://www.python.org/doc/2.7/faq/tutorial.html) holds the intellectual property rights behind Python, underwrites the [PyCon](http://www.python.org/doc/2.7/faq/tutorial.html) conference, and funds many other projects in the Python community.
The Django web framework

Meet Django

Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design.

Developed by a fast-moving online-news operation, Django was designed to handle two challenges: the intensive deadlines of a newsroom and the stringent requirements of the experienced Web developers who wrote it. It lets you build high-performing, elegant Web applications quickly.

Django focuses on automating as much as possible and adhering to the DRY principle.

Dive in by reading the overview →

When you're ready to code, read the installation guide and tutorial.
The **pythonanywhere** hosting platform

Host, run, and code Python in the cloud!

Get started for free. Our basic plan gives you access to machines with a full Python environment already installed. You can develop and host your website or any other code directly from your browser without having to install software or manage your own server.

Need more power? Upgraded plans start at $5/month.

Start running Python online in less than a minute! »

Watch our one-minute video »
Revision control and hosting with GitHub

https://github.com/

Everyone can create free, public repos. Students can create free, private repos. Paid accounts can create private repos, too.
Revision control and hosting with **BitBucket**

[https://bitbucket.org/](https://bitbucket.org/)

**Unlimited private code repositories**

**FREE FOR 5 USERS + GIT OR MERCURIAL + LIGHTWEIGHT CODE REVIEW + MAC AND WINDOWS CLIENT**

- Username
- Email
- Password
- Sign up for free

Everyone can create free, public or private repos. Some restrictions may apply, though, to private repos.
Concepts covered by the course

- Programming and modeling basics
- Models (business data and operations thereupon)
- Views (user-facing views of data and operations)
- Classes and objects
- Databases for persistence
- Web-based APIs (HTTP)
- Version control and hosting
How does this course work?

- Quite **hands-on** — concepts are pointed out and linked
- Fewer slides, more **demo-ing and live programming**
- All material of this course is **public** and **online**. No videos.
- Students exercise software development in small **projects**
- Part of the course’s onsite time is used for **scrum**
- **Grades** are based on presentations and deliverables
Pointers

- Course website
  - http://softlang.wikidot.com/course:startup14

- Public course repository
  - https://github.com/rlaemmel/startup14

- Contact Ralf Lämmel
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Looking forward the course.