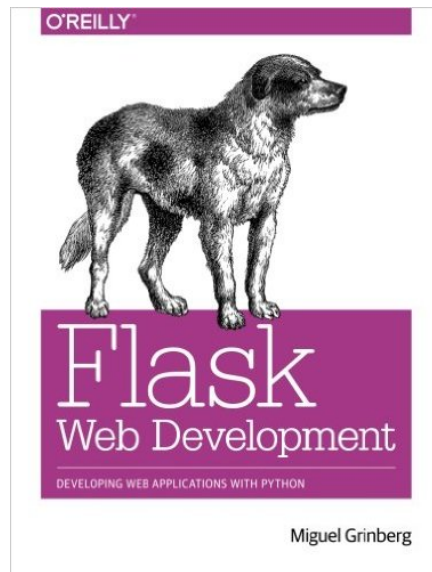# Flask

web development,
one drop at a time

Flask II

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Resources

- Flask Web Development: Developing Web Applications with Python by Miguel Grinberg (1st Edition)

- Sample Course Application: SongBase: https://github.com/udmis/songbase

Jinja2 (review)

- Jinja2 is a modern and designer-friendly templating language for Python.

- /templates folder for HTML template files

Index.html

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Home Page</title>
  </head>
  <body>
    <h1>this is the homepage</h1>
  </body>
</html>
```

song-all.html

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>User Page</title>
  </head>
  <body>
    <h1>Coldplay Top Hits:</h1>
    {# This is a loop #}
    <ul>
      {% for song in songs %}
          <li>{{song}}</li>
      {% endfor %}
    </ul>
  </body>
</html>
```
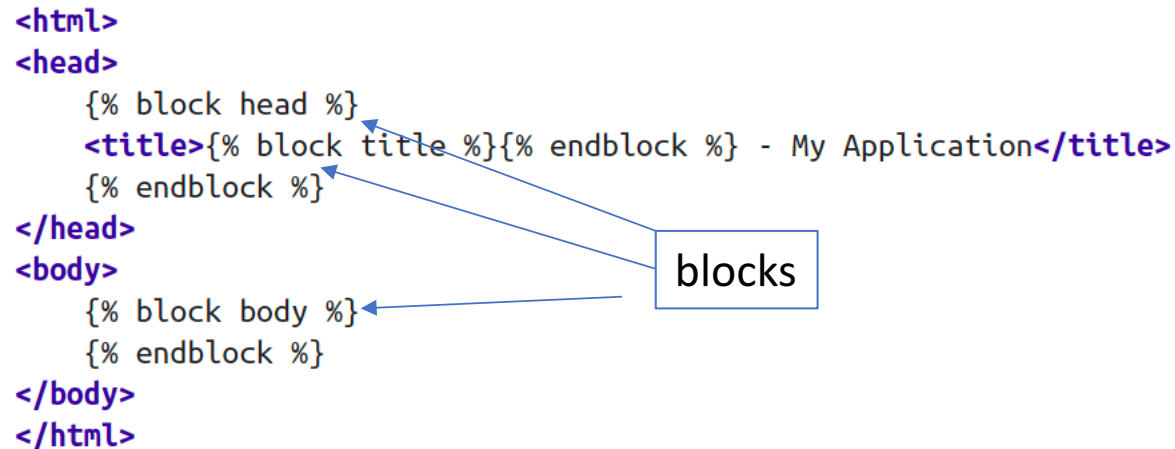
<u>Lots of HTML code are repeated!!!</u>

Template Reuse via Inheritance

base.html

```html
<html>
<head>
    {% block head %}
    <title>{% block title %}{% endblock %} - My Application</title>
    {% endblock %}
</head>
<body>
    {% block body %}
    {% endblock %}
</body>
</html>
```

blocks

index.html

- *block* tags define elements that a derived template can change.

- *super()* is used to retain the original contents.

```html
{% extends "base.html" %}
{% block title %}Index{% endblock %}
{% block head %}
    {{ super() }}
    <style>
    </style>
{% endblock %}
{% block body %}
<h1>Hello, World!</h1>
{% endblock %}
```

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Example

New home-base.html

```html
<!DOCTYPE html>
<html>
  <head>
    {% block head %}
    <meta charset="utf-8">
    <title>{% block title%}{% endblock%} - SongBase</title>
    {% endblock%}
  </head>
  <body>
    {% block body%}
    {% endblock%}
  </body>
</html>
```

Original Index.html

```html
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>Home Page</title>
  </head>
  <body>
    <h1>this is the homepage</h1>
  </body>
</html>
```

New Index.html

```html
{% extends "home-base.html"%}
{% block title %}Home Page{% endblock %}
{% block head%}
  {{ super() }}
  <style>
    h1 {
      color:red;
    }
  </style>
{% endblock%}
{% block body%}
    <h1>this is the homepage</h1>
{% endblock%}
```

Exercise (see songbase repo for details)

- Use template inheritance to add Bootstrap, jQuery, FontAwesome via CDN so that they are available for every page

- Add a navigation bar for every page using the template at https://startbootstrap.com/template-overviews/logo-nav/ and use the SongBase logo

- Note: it's important to have a block for page content and a block for javascripts

- Create a songbase.css file to define custom css style

- Use `git checkout v2` to see the code