

# Understanding the Model-Template-View Pattern

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# Overview



**The Model-Template-View pattern**

**Add Jinja templates**

**Add a data model**

- Text file (JSON), no actual DB

**How do the MTV components interact?**

# Demo



## Jinja templates

- Displaying data to the user
- Generating HTML
- Calling templates from view
- Passing data from view to template
- Jinja variables



# Jinja Templates



## Templates

- Components that *display* data to the user

## Jinja templates generate text files

- We use it to create HTML

## Templates are text files

- With placeholders for variables
- And logic: if, for, filters, etc.

```
<html><head><title>{{name}}'s Page</title></head>
<body>
    <h1>Hi I'm {{name}}!</h1>
    I'm {{age}} years old.
</body></html>
```

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## A Jinja Template Example

`{{ var }}` looks up `var` in the *template context*

Other text is copied to HTML output

This creates *dynamic* HTML page



```
from flask import render_template

def welcome():
    return render_template("welcome.html",
                           name="Bob", age=35)
```

## Calling a Template from a View

**render\_template**: first argument is name of template file

Other arguments are data passed to the *template context*

Templates should be in folder **/templates**

Don't forget the **return** keyword



# Demo



## Adding a model layer

- Represents our data
- Text file instead of database



# Model-Template-View

## Model

Data

Usually from DB

Flask: leaves it to us

## Template

Presentation

Generates HTML

In Flask: Jinja2

## View

Behaviour

Python function

Mapped to URL

Model

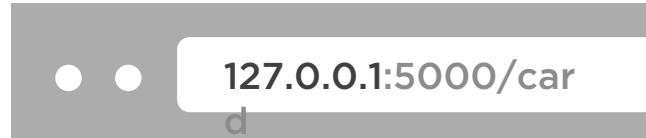
View

Controller





## Web Browser



HTTP GET /card

## Server

```
def card():  
    return render_template(  
        "card.html",  
        card=db[0])
```

## Flash Card

Question: Hello (formal)

Answer: Guten Tag



# Summary



## The Model-Template-View pattern

### Jinja templates

- Jinja variables
- Calling templates from views
- Sending data from view to template

### Add a data model

- Text file (JSON), no actual DB

