Combining Model, View, and Template



Reindert-Jan Ekker

@rjekker https://nl.linkedin.com/in/rjekker



Overview



The Model-Template-View pattern Add templates

Make components work together

- Call model from view
- Call template from view
- View parameters in URLs
- 404 errors



Demo



Template

- Generate HTML
- Call template from view
- Pass data from view to template

Django Templates



Templates

- Components that display data to the user

Templates generate text files

- We use it to create HTML

Templates are text files

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



A Django Template Example {{ var }} looks up var in the template context Other text is copied to HTML output This creates dynamic HTML page



Calling a Template

render: pass request and name of template file

Third argument: dict with data passed to the template

Templates should be in folder /templates inside app

Don't forget the return keyword



Demo



Completing the MTV pattern

- Retrieve model data
- Display it using template

Meeting detail page

- Retrieve meeting object
- Pass it to template
- Take id parameter from URL
- 404 error when not found



Model-Template-View

Model

Data

Model classes

Mapped to DB table

Template

Presentation

Generates HTML

View

Behaviour

Python function

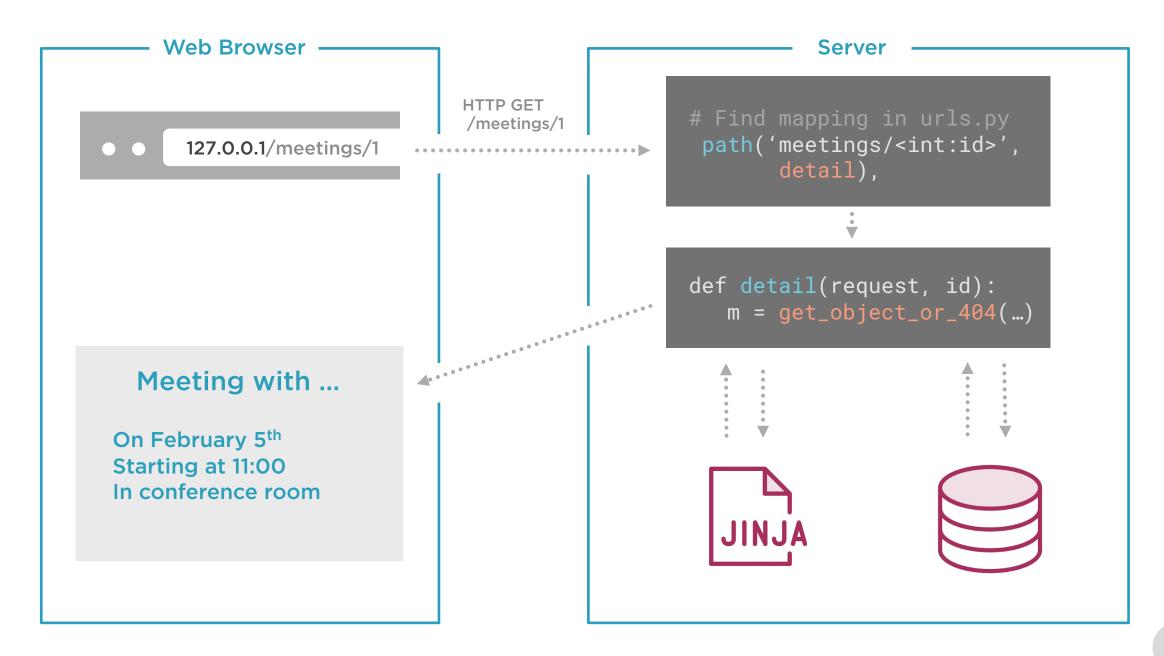
Mapped to URL

Model

View

Controller





Retrieving Model Data

```
# Model classes have a .objects attribute
# That let you retrieve data
# Get all objects
meetings = Meeting.objects.all()
# Get object count
num_meetings = Meeting.objects.count()
# Get a specific object
Meeting= Meeting.objects.get(pk=5)
```

Get or 404

```
from django.shortcuts import get_object_or_404

from .models import Meeting

def detail(request, id):
    meeting = get_object_or_404(Meeting, pk=id)
```



```
urlpatterns = [
    path('/example/<int:x>', my_view)
]
```

Parameters in URLs

<int:x> will match a number in the url

This number will be assigned to the view parameter x

/example/5 : x will be 5

If URL contains no number: 404



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