

Frameworks

Frameworks

Scaffolding for creating applications.

A **Framework** contains an "almost" complete app code, including logic for **the flow of control**.

You must supply

- configuration data (text file, XML, Json, ...)
- missing methods, "slots"

And optionally

- override some frameworks methods with custom code
- add callbacks, "hooks", for extra functionality

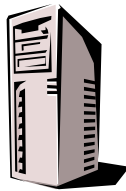
Handling a web request

(1) A web client submits a web request:

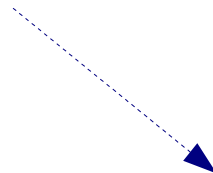
`https://superstore.com/products/list`

an https packet is sent to the superstore.com server...

`GET /products/list`



(2) The server (host)
connects tcp socket to web
server running on port 443.



NGINX
listen *:443

http server
hosting web apps
& static content

Http Server hands off to web app

(3) The web server gives the web request (or stream) to the web application.

The web server may do some pre-processing first.



Decide which code should handle it

- (4) **django framework** parses the http request into a **HttpRequest** object with Cookies, session info, and query params.
- (5) **django framework** compares the request **path** (/products/list) to a "**routing**" or "**url mapping**" specified by the app.

django
framework

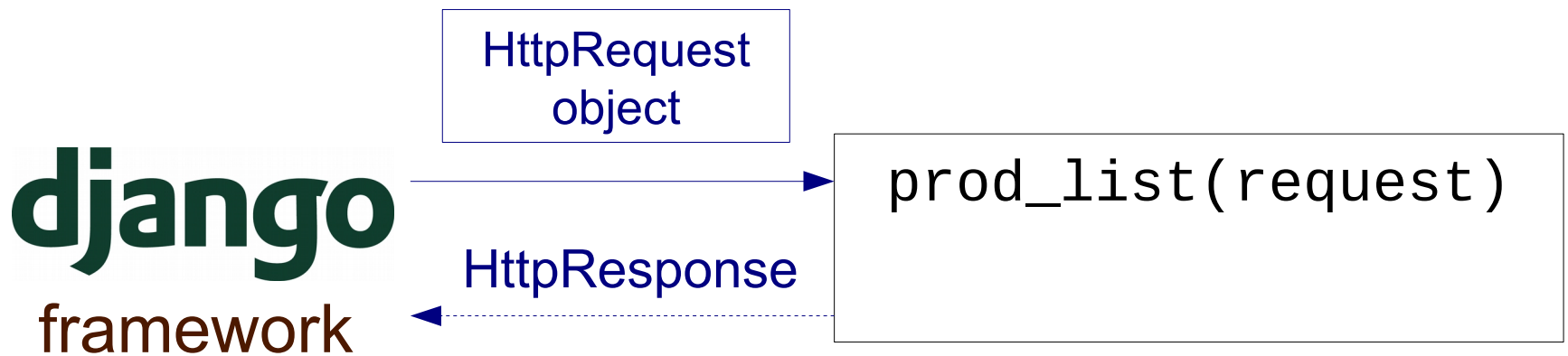
HttpRequest
object

```
urls.py  
path --> controller  
pattern --> controller2  
urlpatterns = [  
    path('products/list', prod_list),  
    ...  
]
```

Your "controller" handles the request

Django framework invokes **your code** (`prod_list`) with the `HttpRequest` object as parameter...

(6) your code must process the request and return an `HttpResponse` object.

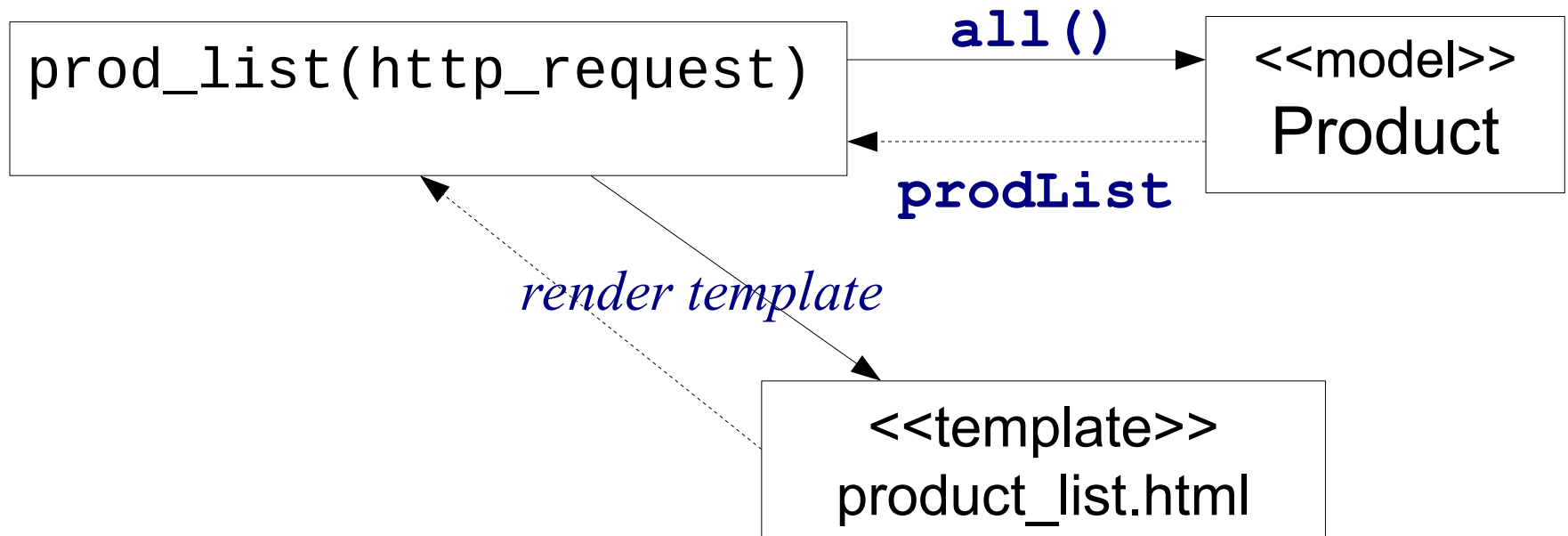


What your "controller" does

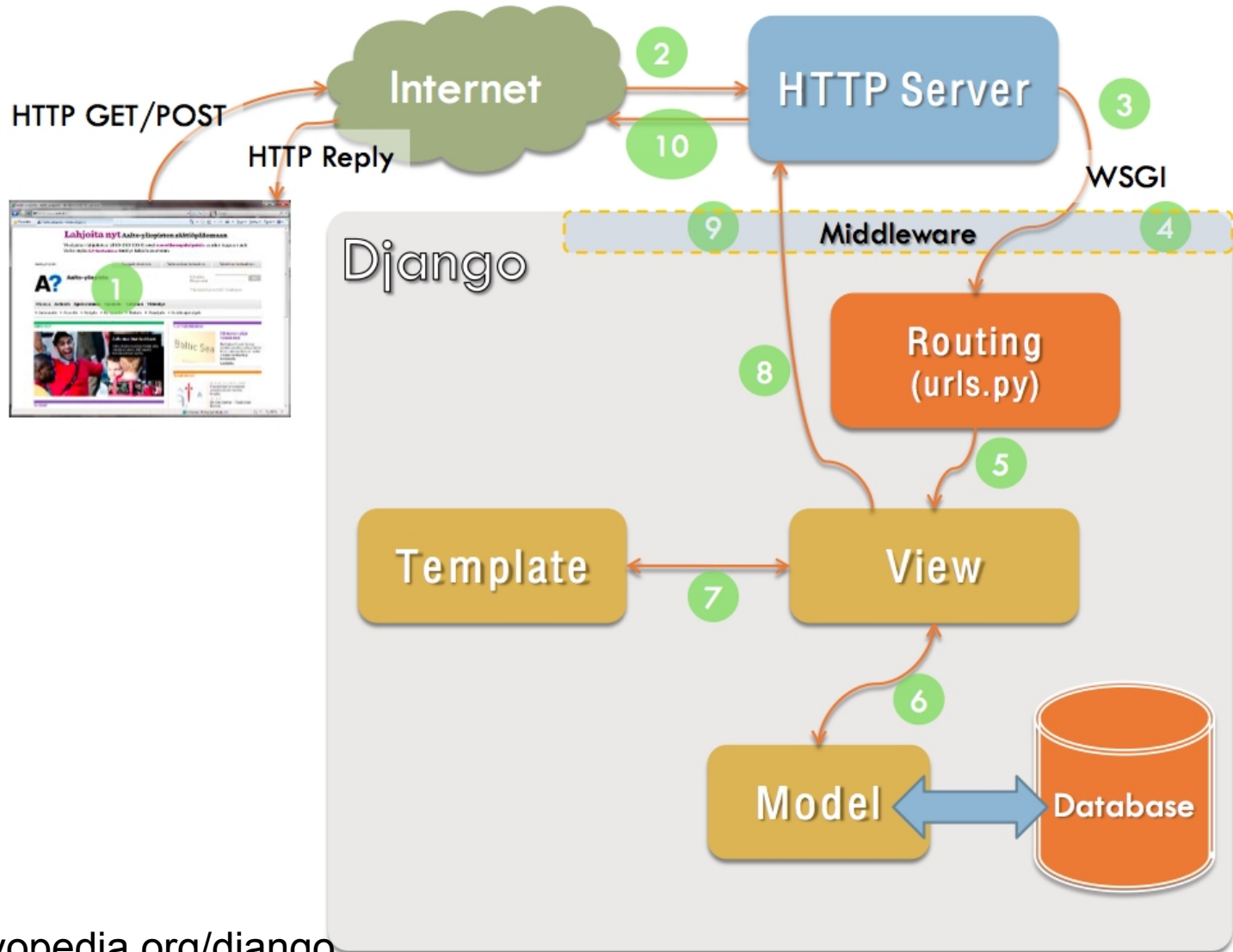
(7) Your controller (Django: "view") applies application logic and uses the Django framework code to process the request.

For a product list, it uses the Product *model* class to retrieve products from a database (the framework does this).

Then, use a template (your code) to create a web page containing products. This is called *rendering* and is done by framework.



Summary



Source:

<https://devopedia.org/django>