TRAINING DAY27 REPORT

24 JULY 2025

What is a Context Processor?

A **context processor** is a **Python function** in Django that takes an **HTTP request object** as an argument and **returns a dictionary** of variables.

These variables are then automatically added to the **context** of all templates, so you don't have to manually pass them from each view.

In simpler words:

Context processors are like global variables for templates.

Why Do We Use Context Processors?

Normally, when rendering a template, we pass a context dictionary from the view:

```python
from django.shortcuts import render

def home(request):
    return render(request, 'home.html', {'site_name': 'MyWebsite'})
```

But if you want site_name to be available in **all templates** without passing it every time, you use a **context processor**.

Benefits:

1. Reuse data across all templates.

2. Reduce repetitive code in views.

3. Can include dynamic data like user info, site settings, or notifications.

How Context Processors Work?

1. Django checks TEMPLATES in settings.py.

2. For each template, it calls all context processors defined in
   OPTIONS['context_processors'].

3. Merges the returned dictionaries into the **template context**.

Default Context Processors in Django?

Django provides several built-in context processors:

Processor	Description
django.template.context_processors.debug	Adds debug info like debug and sql_queries
django.template.context_processors.request	Adds request object in templates
django.contrib.auth.context_processors.auth	Adds user, perms, messages
django.template.context_processors.static	Adds STATIC_URL for static files

django.template.context_processors.media	Adds MEDIA_URL for media files
django.template.context_processors.tz	Adds timezone info

Real-Life Use Cases

1. **User Authentication Info:** Add user object to all templates.

2. **Dynamic Site Settings:** Show site title, footer, contact info globally.

3. **Cart Information:** In an e-commerce site, display cart count on all pages.

4. **Notifications:** Show unread messages for logged-in user globally.