DJANGOTHON 2018

DJINIO

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TEAM - DJANGOSAUR

PROBLEM STATEMENT

Python is embracing async/await more with every new version. Django is synchronous which means no support for this new syntax.

Because of massive codebase, undertaking of conversion will be time-consuming & expensive.

PROPOSED SOLUTION

Importable wrapper on views so code inside can use async/await and hence make concurrent external APIs calls

Add custom tag so awaitables can be handled during rendering

A Meta class with wrapper for Models to make ORM call asynchronous

REAL APPLICATION

```
from djinio import async_view

async def async_request(session, song_name):
    with aiohttp.Timeout(10):
        url = 'https://en.wikipedia.org/wiki/'+song_name
        async with session.get(url) as resp:
            assert resp.status == 200
            return await resp.read()

@async_view
async def detail(request, album_id):
    user = request.user
    album = await get_object_or_404(Album, pk=album_id)

    with aiohttp.ClientSession as session:
        resp1 = await async_request(session, 'Hello')
        resp2 = await async_request(session, 'Set fire to the Rain')
        resp3 = await async_request(session, 'Skyfall')
```

ANAVASTHA - ABSENCE OF FINALITY

```python
@async_view
async def detail(request, album_id):
    user = request.user
    album = await get_object_or_404(Album, pk=album_id)

    with aiohttp.ClientSession as session:
        awaitable = async_request(session, 'Hello')

    return render(request, 'music/detail.html',
        {
            'album': album,
            'user': user,
            'awaitable': awaitable
        })
```

```html
<div>
    <h3>{{ awaitable | await }}</h3>
</div>
```

FUTURE PATH

We already have code uploaded on TestPyPi, it's available on github. We would work to bring it to PyPi repository as well.

Bringing more async functionality to ORM with goal for compatibility with non-blocking database clients.

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THANK YOU!!