
Django-Tailwind

Release 2.0.0

Tim Kamanin

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DEFINITIONS

This document uses the *Tailwind* word when we talk about two things: the CSS framework and the Django package.

So let's agree that we'll use:

- **Django Tailwind**, when we talk about this very package;
- **Tailwind CSS**, when we talk about the CSS framework;

So **Django Tailwind** was created to make **Tailwind CSS** and Django play together ().

1.1 Contents

1.1.1 Installation

Step-by-step instructions

1. Install the `django-tailwind` package via `pip`:

```
python -m pip install django-tailwind
```

If you want to use automatic page reloads during development (see steps 10-12 below) use the `[reload]` extras, which installs the `django-browser-reload` package in addition:

```
python -m pip install django-tailwind[reload]
```

Alternatively, you can install the latest development version via:

```
python -m pip install git+https://github.com/timonweb/django-tailwind.git
```

2. Add `'tailwind'` to `INSTALLED_APPS` in `settings.py`:

```
INSTALLED_APPS = [  
    # other Django apps  
    'tailwind',  
]
```

3. Create a *Tailwind CSS* compatible *Django* app, I like to call it `theme`:

```
python manage.py tailwind init
```

4. Add your newly created `'theme'` app to `INSTALLED_APPS` in `settings.py`:

```
INSTALLED_APPS = [  
    # other Django apps  
    'tailwind',  
    'theme'  
]
```

5. Register the generated 'theme' app by adding the following line to `settings.py` file:

```
TAILWIND_APP_NAME = 'theme'
```

6. Make sure that the `INTERNAL_IPS` list is present in the `settings.py` file and contains the `127.0.0.1` ip address:

```
INTERNAL_IPS = [  
    "127.0.0.1",  
]
```

7. Install *Tailwind CSS* dependencies, by running the following command:

```
python manage.py tailwind install
```

8. The *Django Tailwind* comes with a simple `base.html` template located at `your_tailwind_app_name/templates/base.html`. You can always extend or delete it if you already have a layout.
9. If you are not using the `base.html` template that comes with *Django Tailwind*, add `{% tailwind_css %}` to the `base.html` template:

```
{% load static tailwind_tags %}  
...  
<head>  
    ...  
    {% tailwind_css %}  
    ...  
</head>
```

The `{% tailwind_css %}` tag includes Tailwind's stylesheet.

10. Let's also add and configure `django_browser_reload`, which takes care of automatic page and css refreshes in the development mode. Add it to `INSTALLED_APPS` in `settings.py`:

```
INSTALLED_APPS = [  
    # other Django apps  
    'tailwind',  
    'theme',  
    'django_browser_reload'  
]
```

11. Staying in `settings.py`, add the middleware:

```
MIDDLEWARE = [  
    # ...  
    "django_browser_reload.middleware.BrowserReloadMiddleware",  
    # ...  
]
```

The middleware should be listed after any that encode the response, such as Django's `GZipMiddleware`. The middleware automatically inserts the required script tag on HTML responses before `</body>` when `DEBUG` is

True.

12. Include `django_browser_reload` URL in your `root url.py`:

```
from django.urls import include, path
urlpatterns = [
    ...,
    path("__reload__/", include("django_browser_reload.urls")),
]
```

13. Finally, you should be able to use *Tailwind CSS* classes in HTML. Start the development server by running the following command in your terminal:

```
python manage.py tailwind start
```

Check out the *Usage* section for information about the production mode.

Optional configurations

Content (formerly Purge) rules configuration

The `content` section of your `tailwind.config.js` file is where you configure the paths to all of your HTML templates, JavaScript components, and any other source files that contain *Tailwind* class names.

Depending on your project structure, you might need to configure the content rules in `tailwind.config.js`. This file is in the `static_src` folder of the theme app created by `python manage.py tailwind init {APP_NAME}`.

For example, your `theme/static_src/tailwind.config.js` file might look like this:

```
module.exports = {
  content: [
    // Templates within theme app (e.g. base.html)
    '../templates/**/*.html',
    // Templates in other apps
    '../../templates/**/*.html',
    // Ignore files in node_modules
    '!../../**/node_modules',
    // Include JavaScript files that might contain Tailwind CSS classes
    '../../**/*.js',
    // Include Python files that might contain Tailwind CSS classes
    '../../**/*.py'
  ],
  ...
}
```

Note that you may need to adjust those paths to suit your specific project layout. It is crucial to make sure that *all* HTML files (or files containing HTML content, such as `.vue` or `.jsx` files) are covered by the `content` rule.

For more information about setting `content`, check out the “*Content Configuration*” page of the Tailwind CSS docs: <https://tailwindcss.com/docs/content-configuration>.

Configuration of the path to the npm executable

Tailwind CSS requires *Node.js* to be installed on your machine. *Node.js* is a *JavaScript* runtime that allows you to run *JavaScript* code outside the browser. Most (if not all) of the current frontend tools depend on *Node.js*.

If you don't have *Node.js* installed on your machine, please follow installation instructions from [the official Node.js page](#).

Sometimes (especially on *Windows*), the *Python* executable cannot find the *npm* binary installed on your system. In this case, you need to set the path to the *npm* executable in *settings.py* file manually (*Linux/Mac*):

```
NPM_BIN_PATH = '/usr/local/bin/npm'
```

On *Windows* it might look like this:

```
NPM_BIN_PATH = r"C:\Program Files\nodejs\npm.cmd"
```

Please note that the path to the *npm* executable may be different for your system. To get the *npm* path, try running the command `which npm` in your terminal.

1.1.2 Usage

Running in development mode

To start Django Tailwind in development mode, run the following command in a terminal:

```
python manage.py tailwind start
```

This will start a long-running process that watches files for changes. Use a combination of CTRL + C to terminate the process.

Several things are happening behind the scenes at that moment:

1. The stylesheet is updated every time you add or remove a CSS class in a Django template.
2. The `django-browser-reload` watches for changes in HTML and CSS files. When a Django template or CSS is updated, browser refreshes them. That gives you a smooth development experience without the need to reload the page to see updates.

Building for production

To create a production build of your theme, run:

```
python manage.py tailwind build
```

This will replace the development build with a bundle optimized for production. No further actions are necessary; you can deploy!

1.1.3 Settings

Django Tailwind comes with preconfigured settings. You can override them in the `settings.py` of your Django project.

TAILWIND_APP_NAME

This defines the *Tailwind* theme Django app containing your *Tailwind CSS* styles. I prefer to name such an app 'theme'. You should generate the app during the installation phase by running the following command:

```
python manage.py tailwind init
```

Please refer to the [Installation](#) section for more information on the installation process.

TAILWIND_DEV_MODE (in deprecation)

Determines whether the `browser-sync` snippet is added to the page via the `{% tailwind_css %}` tag. It is set to `False` by default, so if you use legacy pre-3.1.0 configuration and rely on `browser-sync`, add `TAILWIND_DEV_MODE=True` to your `settings.py`.

NPM_BIN_PATH

This defines a path to the `npm` executable in your system.

Tailwind CSS requires you to have *Node.js* installed on your machine. *Node.js* is a *JavaScript* runtime that allows running *JavaScript* code outside a browser. Most of the current frontend tools depend on *Node.js*.

If you don't have *Node.js* installed on your machine, please follow installation instructions from [the official Node.js page](#).

The default value is:

```
NPM_BIN_PATH = 'npm'
```

Please note, that on *Windows* the path might look completely different (pay attention to “backslashes” in the path):

```
NPM_BIN_PATH = r"C:\Program Files\nodejs\npm.cmd"
```

TAILWIND_CSS_PATH

This defines a path to the generated *Tailwind CSS* stylesheet. If you have created a theme app via the `python manage.py tailwind init` command, chances are you don't need to change this value.

However, if you integrated *Tailwind CSS* in another way or want to use a *CDN* version of the bundle, you might want to change the path.

The default value is:

```
TAILWIND_CSS_PATH = 'css/dist/styles.css'
```

1.1.4 Template tags

Django Tailwind introduces a couple of template tags for your convenience.

{% tailwind_css %} tag

Usage

The {% tailwind_css %} tag generates a stylesheet link for the 'theme' app and that's all you need to include *Tailwind's* CSS on a page:

```
{% load tailwind_tags %}
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Django Tailwind</title>
    {% tailwind_css %}
  </head>
  <body></body>
</html>
```

Asset versioning

The tag also supports asset versioning via the v= parameter, like this:

```
{% tailwind_css v='1' %}
```

Depending on your production setup, you may or may not need this functionality, so it's optional.

{% tailwind_preload_css %} tag

The tag generates a preload directive for your stylesheet, which improves loading performance in production. Place it above the {% tailwind_css %} tag:

```
{% load tailwind_tags %}
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Django Tailwind</title>
    {% tailwind_preload_css %}
    {% tailwind_css %}
  </head>
  <body></body>
</html>
```

It also supports asset versioning (if needed):

```
{% tailwind_preload_css v='1' %}
```

1.1.5 Migrating from browser-sync to django-browser-reload

Starting with version 3.1.0, *Django-Tailwind* is dropping support for *Node.JS*-based `browser-sync` and switching to *Django*-based `django-browser-reload` as the primary solution for seamless page and asset updates during development.

If you generated *Tailwind CSS* before 3.1.0, I strongly suggest you to upgrade your project.

If you don't want to upgrade and are happy with `browser-sync`, make sure that you have `TAILWIND_DEV_MODE=DEBUG` set in your `settings.py` file.

Please follow the following migration steps.

1. Upgrade *Django-Tailwind* to its latest version:

```
pip install django-tailwind --upgrade
```

2. Add `django_browser_reload` to `INSTALLED_APPS` in `settings.py`:

```
INSTALLED_APPS = [
    # other Django apps
    'tailwind',
    'theme',
    'django_browser_reload'
]
```

3. Staying in `settings.py`, add the middleware:

```
MIDDLEWARE = [
    # ...
    "django_browser_reload.middleware.BrowserReloadMiddleware",
    # ...
]
```

The middleware should be listed after any that encode the response, such as Django's `GZipMiddleware`. The middleware automatically inserts the required script tag on HTML responses before `</body>` when `DEBUG` is `True`.

4. Include `django_browser_reload` URL in your root `url.py`:

```
from django.urls import include, path
urlpatterns = [
    ...,
    path("__reload__/", include("django_browser_reload.urls")),
]
```

5. Now, `cd` to your `TAILWIND_APP_NAME` `static_src` directory. In my case, `TAILWIND_APP_NAME` is `theme`, thus I `cd` to `theme/static_src`:

```
cd theme/static_src
```

6. Remove `bs.config.js` file from the `theme/static_src` directory.
7. Open `package.json` file in `theme/static_src` directory, and remove the following commands under `scripts`: `sync`, `dev:sync`, `dev`.
8. Staying in `package.json`, rename the `dev:tailwind` command under `scripts` to `dev`. That's the only command we need for development from now on.

9. Staying in the same directory, uninstall dependencies we don't need anymore, run the following command:

```
npm uninstall browser-sync nodemon npm-run-all
```

10. Run `python manage.py tailwind start` to make sure everything runs properly.

1.1.6 Upgrading from v2 to v3

If you're coming from *Django-Tailwind* 2.x, your *Tailwind CSS* project probably depends on *Tailwind CSS* 2.x. If you want to use latest features of the version 3.x, you need to upgrade your *Tailwind CSS* app from 2.x to 3.

In the following instructions, I assume that your *Tailwind CSS* app name is set as `TAILWIND_APP_NAME = 'theme'` in `settings.py`.

If it's different for you, please replace the `theme` with an app name of your choice, while following my steps.

Let's do this!

1. Update *Django-Tailwind* to 3.x by running the following command:

```
pip install --upgrade django-tailwind
```

2. Next, update dependencies and plugins via npm. Go to **theme/static_src** directory and run the following command:

```
npm install -D tailwindcss@latest \
  @tailwindcss/typography@latest \
  @tailwindcss/forms@latest \
  @tailwindcss/aspect-ratio@latest \
  @tailwindcss/line-clamp@latest \
  postcss@latest \
  autoprefixer@latest
```

3. Now, open **theme/static_src/bs.config.js** and replace `...tailwindConfig.purge` with `...tailwindConfig.content`,
4. Then, open **theme/static_src/tailwind.config.js** in a code editor, and
5. Remove the `mode` property. In Tailwind 3.0, `jit` is always on, so there's no use of `mode: jit` string anymore,
6. Rename `purge` to `content`,
7. Remove dark mode configuration by deleting the line containing `darkMode`,
8. Staying with the open **theme/static_src/tailwind.config.js** file, refer to the [official Tailwind CSS upgrade guide](#) and see if there's anything else you need to change in your **tailwind.config.js**. In most cases everything should already be fine, but depending on your configuration, some parts may need your attention.

And that's it. You're now on the latest Django-Tailwind 3.0 with the latest Tailwind CSS 3.0 installed and ready to go.

1.1.7 Updating *Tailwind CSS* and its dependencies

When a new release of *Tailwind CSS* comes out, you can update your theme project without updating *Django Tailwind*.

Checking if there are updates for *Tailwind CSS* and its dependencies

Before doing an update, you can check if there are any updates. Run the following command:

```
python manage.py tailwind check-updates
```

This command runs the `npm outdated` command behind the scenes in the context of your `theme/static_src` directory.

If there are updates, you'll see a table of dependencies with the latest compatible versions. If there are no updates, this command will return no output.

Updating *Tailwind CSS* and its dependencies

If you want to use the latest version of *Tailwind CSS*, run the following command:

```
python manage.py tailwind update
```

This command runs the `npm update` command behind the scenes in the context of your `theme/static_src` directory.

If there are updates, you'll see a log of updated dependencies. If there are no updates, this command will return no output.

1.1.8 Running in Docker

You can find a Docker example under the `example` directory.

Check the included `example/Dockerfile` and `example/docker-compose.yml` for more information.

Here's how to start the `example` project via Docker:

1. Go into the `example` directory;

```
cd example
```

2. Build containers via `docker-compose`:

```
docker-compose build
```

3. Start containers:

```
docker-compose up
```

4. Open `http://localhost:8000` in a browser. You should see the main page.