

Django Paris

Enhancing your Django 5.0
forms with Alpine.js

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Hello



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Django Chat 🗣️

djangochat.com

Paris?

Paths

HQ Fontainebleau

Enhancing your Django 5.0 Forms with Alpine.js

Alpine.js



What is
Alpine.js?

And why should I
use it?

Alpine.js Example

```
<div x-data={count:0}>  
  <p x-text="count"></p>  
  <button x-on:click="count++">  
    Click me  
  </button>  
</div>
```


Locality of Behaviour

Feels like jQuery

Alpine.js 🥰

Django 5.0

Forms

Key changes in form rendering

Django Version	Can Customise	How good?	But...
1.11	Widget rendering	OK 🙄	No one needs it
4.1	Form template	Great 👍	Hard to override single field
5.0	BoundField template	Super 🎉	But nothing! 🐎

Demo

Sample code

https://github.com/carltongibson/notes/tree/main/examples/alpine_forms

Write up to follow:

- fosstodon.org/@carlton
- noumenal.es

Demo

Settings

```
INSTALLED_APPS = [  
    ...  
    "alpine_forms",  
    "django.forms",  
    "template_partials",  
]  
  
FORM_RENDERER =  
"django.forms.renderers.TemplatesSetting"
```


Overriding the default templates.

```
templates:  
  django:  
    forms:  
      div.html  
      field.html
```

Django's div template

```
{{ errors }}
{% if errors and not fields %}
    <div>{% for field in hidden_fields %}{{ field }}{% endfor
%}</div>
{% endif %}
{% for field, errors in fields %}
    <div{% with classes=field.css_classes %}{% if classes %}
class="{{ classes }}"{% endif %}{% endwith %}>
        {{ field.as_field_group }}
        {% if forloop.last %}
            {% for field in hidden_fields %}{{ field }}{% endfor %}
        {% endif %}
    </div>
{% endfor %}
{% if not fields and not errors %}
    {% for field in hidden_fields %}{{ field }}{% endfor %}
{% endif %}
```

Our div template

```
{{ errors }}
{% for field, errors in fields %}
    {{ field.as_field_group }}
{% endfor %}
{% for field in hidden_fields %}
    {{ field }}
{% endfor %}
```

Django's field group template

```
{% if field.use_fieldset %}
    <fieldset{% if field.help_text and field.auto_id and
"aria-describedby" not in field.field.widget.attrs %}
aria-describedby="{{ field.auto_id }}_helptext"{% endif
%}>
        {% if field.label %}{{ field.legend_tag }}{% endif %}
        {% else %}
        {% if field.label %}{{ field.label_tag }}{% endif %}
        {% endif %}
        {% if field.help_text %}<div class="helptext"{% if
field.auto_id %} id="{{ field.auto_id }}_helptext"{%
endif %}>{{ field.help_text|safe }}</div>{% endif %}
        {{ field.errors }}
        {{ field }}{% if field.use_fieldset %}</fieldset>{%
endif %}
```

Our field template

```
{% load partials %}  
<div ...>  
    {% partialdef field-group inline %}  
  
        {# Django's Field Group Template  
        Here #}  
  
    {% endpartialdef %}  
</div>
```

Example 1: Field Validation

Define the form field:

```
class ExampleForm(forms.Form):  
    favourite_framework =  
    forms.CharField(  
        label="What's your favourite  
web framework?"  
    )
```

Customise the template:

```
class ExampleForm(forms.Form):
    favourite_framework = forms.CharField(
        label="What's your favourite web framework?",
        template_name="example-form.html#favourite-framework",
    )
```

Template:

```
{% partialdef favourite-framework %}
<div>
{% include 'django/forms/field.html#field-group' %}
</div>
{% endpartialdef %}
```

Make sure it still works.

Add customisation:

```
{% partialdef favourite-framework %}
<div x-data="{
    valid: null,
    checkValid(event) {
        let value = event.target.value.toLowerCase();
        // Check: Is value valid?
        this.valid = valid;
    }
}">
{% include 'django/forms/field.html#field-group' %}
<p class="text-green-600"
  x-show="valid === 'success'"
  x-transition>You're good!</p>
<p class="text-yellow-600"
  x-show="valid === 'maybe'"
  x-transition>Maybe... – keep typing!</p>
<p class="text-red-600"
  x-show="valid === 'error'"
  x-transition>That doesn't look right.
    You sure you didn't mean Django? 🤔</p>
</div>
{% endpartialdef %}
```

Set event handler:

```
class ExampleForm(forms.Form):  
    favourite_framework =  
    forms.CharField(  
        label="...",  
        template_name="...",  
        widget=forms.TextInput(  
            attrs={  
                "x-on:change": "checkValid",  
            }  
        ),  
    )
```

Example 2: Dependent Fields

Set up dependent field

```
compressor = forms.ChoiceField(  
    template_name="example-  
form.html#compressor",  
    label="Do you use django-compressor?",  
    choices=[  
        ("YES", "Yes"),  
        ("NO", "No")  
    ],  
    widget=forms.Select(  
        attrs={  
            "x-on:change": "checkHero",  
        }  
    )  
)
```

Template for that

```
{% partialdef compressor %}  
<div x-show="component === 'STATICFILES'" x-  
transition  
  x-data="{  
    hero:false,  
    checkHero(event) {  
      this.hero = event.target.value ===  
'YES';  
    }  
  }">  
{% include 'django/forms/field.html#field-group' %}  
<p class="text-green-600" x-show="hero" x-  
transition>Hero! 🦄</p>  
</div>  
{% endpartialdef %}
```

Set up main field.

```
favourite_component = forms.ChoiceField(
    label="What's your favourite
component?",
    choices=[ (None, "---") ] +
ComponentChoices.choices,
    widget=forms.Select(
        attrs={
            "x-model": "component",
        }
    ),
)
```

Form Template

```
<section x-data="{component: null}">
  {% include 'django/forms/div.html' %}
</section>
```

```
class ExampleForm(forms.Form):
    ...
    template_name = "example-
form.html"
```

The whole form

```
class ExampleForm(forms.Form):
    favourite_framework = forms.CharField(
        label="What's your favourite web framework?",
        template_name="example-form.html#favourite-framework",
        widget=forms.TextInput(
            attrs={
                "x-on:change": "checkValid",
            }
        ),
    )

    favourite_component = forms.ChoiceField(
        label="What's your favourite component?",
        choices=[(None, "---")] + ComponentChoices.choices,
        widget=forms.Select(
            attrs={
                "x-model": "component",
            }
        ),
    )

    compressor = forms.ChoiceField(
        template_name="example-form.html#compressor",
        label="Do you use django-compressor?",
        choices=[("YES", "Yes"), ("NO", "No")],
        widget=forms.RadioSelect(
            attrs={
                "x-on:change": "checkHero",
            }
        ),
    )

    template_name = "example-form.html"
```


The whole template

```
{% load partials %}

{% partialdef favourite-framework %}
<div x-data="{
  valid: null,
  checkValid(event) {
    let value = event.target.value.toLowerCase();
    if (value === 'django') {
      valid = 'success';
    } else if (value === '') {
      valid = 'empty';
    } else if ('django'.startsWith(value)) {
      valid = 'maybe';
    } else {
      valid = 'error';
    }
    this.valid = valid;
  }
}">
{% include 'django/forms/field.html#field-group' %}
<p class="text-green-600" x-show="valid === 'success'" x-transition>You're good!</p>
<p class="text-yellow-600" x-show="valid === 'maybe'" x-transition>Maybe... - keep typing!</p>
<p class="text-red-600" x-show="valid === 'error'" x-transition>
  That doesn't look right. You sure you didn't mean Django? 🤔
</p>
</div>
{% endpartialdef %}

{% partialdef compressor %}
<div x-show="component === 'STATICFILES'" x-transition
  x-data="{
    hero:false,
    checkHero(event) {
      this.hero = event.target.value === 'YES';
    }
  }">
{% include 'django/forms/field.html#field-group' %}
<p class="text-green-600" x-show="hero" x-transition>Hero! 🦸</p>
</div>
{% endpartialdef %}

{# To make the compressor field dependent on the component select we #}
{# make the whole form an Alpine component #}
{# Set the form's template to this file. #}
<section x-data="{component: null}">
  {% include 'django/forms/div.html' %}
</section>
```

Locality of Behaviour

la fin

Sample code

https://github.com/carltongibson/notes/tree/main/examples/alpine_forms

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