

Lesson 06 Demo 05

Combining Loops and Conditionals in Jinja2

Objective: To combine loops and conditionals in Jinja2 for dynamically generating content based on varying data conditions

Tools required: Linux terminal

Prerequisites: None

Steps to be followed:

1. Prepare data and template files
2. Render and execute a template with a Python script

Step 1: Prepare data and template files

1.1 Run the following command to create a file:

sudo nano combined_data.yaml

```
poojahksimplile@ip-172-31-36-118:~$ sudo nano combined_data.yaml
```

1.2 Copy and paste the below script into the **combined_data.yaml** file:

```
products:
- name: Laptop
  price: 1000
  in_stock: true
- name: Smartphone
  price: 500
  in_stock: false
- name: Tablet
  price: 300
  in_stock: true
discount: 10
```

```

GNU nano 6.2                                combined_data.yaml
products:
  - name: Laptop
    price: 1000
    in_stock: true
  - name: Smartphone
    price: 500
    in_stock: false
  - name: Tablet
    price: 300
    in_stock: true
discount: 10

```

1.3 Run the following command to create another file:

sudo nano combined_template.j2

```

poojahksimplile@ip-172-31-36-118:~$ sudo nano combined_template.j2

```

1.4 Copy and paste the below script into the **combined_template.j2** file:

Product List:

```

{% for product in products %}
- {{ product.name }} - ${ product.price }}
  {% if product.in_stock %}
    ({{ discount }}% off)
  {% else %}
    (Out of stock)
  {% endif %}
{% endfor %}

```

```

GNU nano 6.2                                combined_template.j2
Product List:
{% for product in products %}
- {{ product.name }} - ${ product.price }}
  {% if product.in_stock %}
    ({{ discount }}% off)
  {% else %}
    (Out of stock)
  {% endif %}
{% endfor %}

```

Step 2: Render and execute a template with a Python script

2.1 Run the following command to create a file:

```
sudo nano render_combined_template.py
```

```
poojahksimplile@ip-172-31-36-118:~$ sudo nano render_combined_template.py
poojahksimplile@ip-172-31-36-118:~$ █
```

2.2 Copy and paste the below script into the **render_combined_template.py** file:

```
from jinja2 import Environment, FileSystemLoader
import yaml

# Load data from YAML file
with open('combined_data.yaml', 'r') as file:
    data = yaml.safe_load(file)

# Set up Jinja2 environment
env = Environment(loader=FileSystemLoader('.'))
template = env.get_template('combined_template.j2')

# Render template with data
rendered_text = template.render(data)

# Print or save the rendered text
with open('combined_output.txt', 'w') as output_file:
    output_file.write(rendered_text)

print(rendered_text)
```

```

GNU nano 6.2                                render_combined_template.py
from jinja2 import Environment, FileSystemLoader
import yaml

# Load data from YAML file
with open('combined_data.yaml', 'r') as file:
    data = yaml.safe_load(file)

# Set up Jinja2 environment
env = Environment(loader=FileSystemLoader('.'))
template = env.get_template('combined_template.j2')

# Render template with data
rendered_text = template.render(data)

# Print or save the rendered text
with open('combined_output.txt', 'w') as output_file:
    output_file.write(rendered_text)

print(rendered_text)

```

2.3 Run the Python script using the following command:

python render_combined_template.py

```
poojahksimplile@ip-172-31-36-118:~$ python render_combined_template.py
```

Below is the following output:

```

poojahksimplile@ip-172-31-36-118:~$ python render_combined_template.py
Product List:

- Laptop - $1000
    (10% off)

- Smartphone - $500
    (Out of stock)

- Tablet - $300
    (10% off)

```

By following these steps, you have successfully combined loops and conditionals in Jinja2 for dynamically generating content based on varying data conditions.