

Program 15 - Django Weather App

AIM To develop a weather application frontend using Django templating that displays current weather information along with a line chart showing past 5 days' temperature trends using Chart.js.

DESCRIPTION This experiment demonstrates how to build a weather app using Django templates and Chart.js for visualization. The app fetches weather data, including current temperature, description, and icon, and renders it dynamically on a webpage. It also displays historical temperature data for the past 5 days as a line chart. This project is ideal for beginners to learn Django templating, integration of JavaScript libraries like Chart.js, and dynamic data visualization on the frontend.

PROJECT STRUCTURE weather-app/ | ├── templates/ | └── index.html # Main HTML template with Django template tags and Chart.js integration | ├── static/ | └── (optional static files like CSS or JS if any) | ├── views.py # Django view to pass weather data to template | ├── urls.py # URL configuration for the app | ├── settings.py # Django project settings | └── README.md # Project documentation

INSTALLATION & SETUP PREREQUISITES • Python 3.x • Django installed (pip install django) • Basic knowledge of Django templating and Python • Chart.js included via CDN (no extra installation needed)

STEPS TO RUN THE PROJECT 1.Create Django Project & App `django-admin startproject weather_project` `cd weather_project` `python manage.py startapp weather_app`

2.Setup URL and Views Add URL route to render the weather template. Create view function to fetch and pass weather data (current + historical) as context. 3.Create Template Place index.html inside templates/ folder. Use Django templating tags to insert weather data into the HTML and JavaScript. 4.Run the Server `python manage.py runserver`

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PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files> mkdir djangodemo

Directory: C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files

Mode                LastWriteTime         Length Name
----                -
d-----          23-06-2025   05:12 PM          djangodemo

PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files> cd djangodemo
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo> pip install virtualenv
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: virtualenv in c:\users\srithan\appdata\roaming\python\python38\site-packages (20.25.1)
Requirement already satisfied: distlib<1,>=0.3.7 in c:\users\srithan\appdata\roaming\python\python38\site-packages (from virtualenv) (0.3.8)
Requirement already satisfied: filelock<4,>=3.12.2 in c:\users\srithan\appdata\roaming\python\python38\site-packages (from virtualenv) (3.13.1)
Requirement already satisfied: platformdirs<5,>=3.9.1 in c:\users\srithan\appdata\roaming\python\python38\site-packages (from virtualenv) (4.2.0)
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo> virtualenv virdemo
created virtual environment CPython3.11.2.final.0-64 in 1541ms
creator CPythonWindows(dest=C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo, clear=False, no_vcs_ignore=False, global=False)
seeder FromAppData(download=False, pip-bundle, setuptools-bundle, wheel-bundle, via=copy, app_data_dir=C:\Users\SRITHAN\AppData\Local\pypa\virtualenv)
added seed packages: pip==24.0, setuptools==69.1.1, wheel==0.42.0
activators BashActivator,BatchActivator,FishActivator,PowerShellActivator,PythonActivator
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo> cd virdemo
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo> cd scripts
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo\scripts> activate
activate : The term 'activate' is not recognized as the name of a
cmdlet, function, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the path
is correct and try again.
At line:1 char:1
+ ~~~~~
+ activate
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (activate:String) [], C
ommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

Suggestion [3,General]: The command activate was not found, but does exist in the current location. Windows PowerShell does not load commands from the current location by default
. If you trust this command, instead type: ".activate". See "get-help about Command Precedence" for more details.
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo\scripts> activate
activate : The term 'activate' is not recognized as the name of a
cmdlet, function, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the path
is correct and try again.

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is correct and try again.
At line:1 char:1
+ deactivate
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (deactivate:String) [],
CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

Suggestion [3,General]: The command deactivate was not found, but does exist in the current location. Windows PowerShell does not load commands from the current location by default
. If you trust this command, instead type: ".deactivate". See "get-help about Command Precedence" for more details.
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo\scripts> cd ..
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo> pip install django
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: django in c:\users\srithan\appdata\roaming\python\python38\site-packages (4.2.10)
Requirement already satisfied: asgiref<4,>=3.6.0 in c:\users\srithan\appdata\roaming\python\python38\site-packages (from django) (3.7.2)
Requirement already satisfied: sqlparse>=0.3.1 in c:\users\srithan\appdata\roaming\python\python38\site-packages (from django) (0.4.4)
Requirement already satisfied: backports.zoneinfo in c:\users\srithan\appdata\roaming\python\python38\site-packages (from django) (0.2.1)
Requirement already satisfied: tzdata in c:\users\srithan\appdata\roaming\python\python38\site-packages (from django) (2023.3)
Requirement already satisfied: typing-extensions>=4 in c:\users\srithan\appdata\roaming\python\python38\site-packages (from asgiref<4,>=3.6.0-django) (4.12.2)
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo> django-admin start project projdemo
django-admin : The term 'django-admin' is not recognized as the name
of a cmdlet, function, script file, or operable program. Check the
spelling of the name, or if a path was included, verify that the path
is correct and try again.
At line:1 char:1
+ ~~~~~
+ django-admin start project projdemo
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (django-admin:String) [
], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\djangodemo\virdemo> cd projdemo
cd : Cannot find path 'c:\Users\SRITHAN\OneDrive\Desktop\SDC

```

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PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\Experiment-10_NodeJS_JWT_Auth> git init
Initialized empty Git repository in C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\Experiment-10_NodeJS_JWT_Auth\.git\
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\Experiment-10_NodeJS_JWT_Auth> cd ..
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files> git init
Reinitialized existing Git repository in C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files\.git\
PS C:\Users\SRITHAN\OneDrive\Desktop\SDC files\Srithan sdc\Srithan SDC Files> git push -u origin main
Enumerating objects: 75, done.
Counting objects: 100% (75/75), done.
Delta compression using up to 12 threads
Compressing objects: 100% (59/59), done.
Writing objects: 100% (61/61), 2.97 MiB | 1.24 MiB/s, done.
Total 61 (delta 8), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (8/8), completed with 6 local objects.

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5. Visit in Browser Open your browser and go to: <http://127.0.0.1:8000/>

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