**Virtualna okolja za python na Windows računalniku**

**Osnovni ukazi:**

|  |  |
| --- | --- |
| V direktoriju v katerem smo kreiramo virtualno okolje imenovano venv | ***python –m venv venv*** |
| Aktiviramo virtualno okolje, dobimo (venv) v ukazno vrstico | ***venv\Scripts\activate*** |
| V venv instaliramo Django==5.0.4 | ***pip install Django==5.0.4*** |
| Instaliramo cel seznam paketov v venv. Seznam je v zbirki requirements.txt | ***pip install -r requirements.txt*** |
| Naročimo virtualnemu okolju, da naredi novo zbirko imenovano instalirano.txt in vanjo napiše kaj se je dejansko instaliralo | ***pip freeze >instalirano.txt*** |
| Deaktiviramo venv. Gremo iz okolja. V ukazni vrstici izgine (venv) | **deactivate** |

Po izvedbi zgornjih ukazov vidimo, da se kup stvari ni instaliralo:

|  |  |
| --- | --- |
| (venv) C:\desweb\cop>***type requirements.txt***  asgiref==3.8.1  click==8.1.7  gunicorn==22.0.0  h11==0.14.0  packaging==24.0  psycopg2==2.9.9  sqlparse==0.5.0  typing\_extensions==4.11.0  requests==2.32.3  django-cors-headers==4.6.0  djangorestframework==3.15.2  six==1.17.0  debugpy==1.8.11  cryptography==44.0.0  django-rest-knox==5.0.2  pgOperations==0.0.3  Datetime==5.5  django-filter==24.3  drf-access-policy==1.5.0 | **(**venv) C:\desweb\cop>***type instalirano.txt***  asgiref==3.8.1  Django==5.0.4  sqlparse==0.5.3  tzdata==2025.1 |

**Zakaj se ni instaliral recimo drugi na seznamu click==8.1.7?**

Poskusimo ga instalirat na roke:

(venv) C:\desweb\cop>***pip install click==8.1.7***

Collecting click==8.1.7

Using cached click-8.1.7-py3-none-any.whl.metadata (3.0 kB)

Collecting colorama (from click==8.1.7)

Downloading colorama-0.4.6-py2.py3-none-any.whl.metadata (17 kB)

Downloading click-8.1.7-py3-none-any.whl (97 kB)

Downloading colorama-0.4.6-py2.py3-none-any.whl (25 kB)

Installing collected packages: colorama, click

Successfully installed click-8.1.7 colorama-0.4.6

[notice] A new release of pip is available: 24.3.1 -> 25.0.1

[notice] To update, run: python.exe -m pip install --upgrade pip

Vidimo, da se je sedaj click-8.1.7 instaliral. Hm?

Imamo še en predlog, (v rdečem, da bi nadgradili pip ukaz) pa dajmo

(venv) C:\desweb\cop>***python.exe -m pip install --upgrade pip***

Requirement already satisfied: pip in c:\desweb\cop\venv\lib\site-packages (24.3.1)

Collecting pip

Using cached pip-25.0.1-py3-none-any.whl.metadata (3.7 kB)

Using cached pip-25.0.1-py3-none-any.whl (1.8 MB)

Installing collected packages: pip

Attempting uninstall: pip

Found existing installation: pip 24.3.1

Uninstalling pip-24.3.1:

Successfully uninstalled pip-24.3.1

Successfully installed pip-25.0.1

Pogledamo kaj je sedaj instalirano: ***pip freeze*** (izpis na zaslon, ker nismo navedli zbirke)

(venv) C:\desweb\cop>**pip freeze**

asgiref==3.8.1

click==8.1.7

colorama==0.4.6

Django==5.0.4

sqlparse==0.5.3

tzdata==2025.1

Vidimo, da je click==8.1.7 instaliran. Očitno se je v paketu z njim instaliral še paket colorama !?

Poskusimo instalirat še **psycopg2==2.9.9**, za taterega predavatelj pravi, da je problematičen, ker potrebuje dependices. Torej morajo biti določene stvari že prej instalirane, da lahko instaliraš psycopg2==2.9.9.

Psycoph2 je adapter za **PostgreSQL** (da približno vemo kaj delamo)

Poskusimo instalirat **psycopg2==2.9.9,** bomo videli kaj bo rekel.

Najprej sem se zmotil, in nisem napisal verzije. Brez problema je instaliral: **psycopg2==2.9.1**

Instalacija verzije 2.9.9:

(venv) C:\desweb\cop>***pip install psycopg2==2.9.9***

Collecting psycopg2==2.9.9

Using cached psycopg2-2.9.9.tar.gz (384 kB)

Installing build dependencies ... done

Getting requirements to build wheel ... error

error: subprocess-exited-with-error

× Getting requirements to build wheel did not run successfully.

│ exit code: 1

╰─> [21 lines of output]

running egg\_info

writing psycopg2.egg-info\PKG-INFO

writing dependency\_links to psycopg2.egg-info\dependency\_links.txt

writing top-level names to psycopg2.egg-info\top\_level.txt

Error: pg\_config executable not found.

Če ne more zbuldat mu dam pa že zbuildano verzijo…

(venv) C:\desweb\cop>***pip install psycopg2-binary==2.9.9***

Collecting psycopg2-binary==2.9.9

Downloading psycopg2-binary-2.9.9.tar.gz (384 kB)

Installing build dependencies ... done

Getting requirements to build wheel ... error

error: subprocess-exited-with-error

× Getting requirements to build wheel did not run successfully.

│ exit code: 1

╰─> [21 lines of output]

running egg\_info

writing psycopg2\_binary.egg-info\PKG-INFO

writing dependency\_links to psycopg2\_binary.egg-info\dependency\_links.txt

writing top-level names to psycopg2\_binary.egg-info\top\_level.txt

Error: pg\_config executable not found.

Tudi ne! Res nekaj rabi.. pg\_config ?

Nakopiral sem mu pg\_config.exe na c:\desweb\cop\venv\Scripts\bin (dibil sem ga na svojem računalniku, kjer imam instaliran postgreSQL)

Dopolnil sem pot kar z ukazom: >***set PATH=c:\desweb\cop\venv\Scripts\bin;%PATH%*** da ne hodim vnatavitve sistem + envoronment variable. Potem sem zagnal pip instal psycopg2=2.9.9 in mi je instaliral PostgreSQL 2.9.10. Še bolje…

Če pogledam kaj je nameščeno: pip freeze

(venv) C:\desweb\cop\venv\Scripts\bin>pip freeze

asgiref==3.8.1

click==8.1.7

colorama==0.4.6

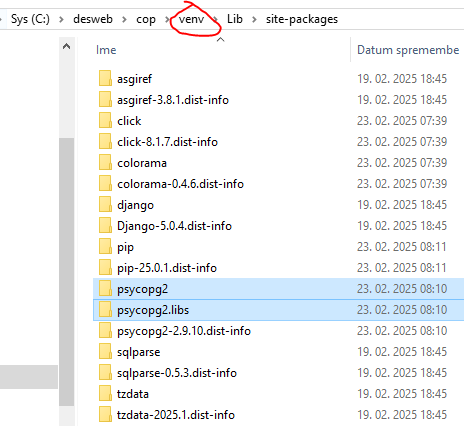
Django==5.0.4

psycopg2==2.9.10

sqlparse==0.5.3

tzdata==2025.1

Dejansko je nekaj namestilo:



Preverim uspešnost namestitve:

(venv) C:\desweb\cop\venv\Scripts\bin>**pip show psycopg2**

Name: psycopg2

Version: 2.9.10

Summary: psycopg2 - Python-PostgreSQL Database Adapter

Home-page: https://psycopg.org/

Author: Federico Di Gregorio

Author-email: fog@initd.org

License: LGPL with exceptions

Location: C:\desweb\cop\venv\Lib\site-packages

Requires:

Required-by:

Kaj če bi sedaj pobrisali vse nameščene pakete iz requirements.txt in ponovno poskusili zagnati namestitev za preostale pakete…

***pip install -r requirements.txt*** instalira kot nor…

preverimo kaj je instalirano:

(venv) C:\desweb\cop>***pip freeze***

asgiref==3.8.1

certifi==2025.1.31

cffi==1.17.1

charset-normalizer==3.4.1

click==8.1.7

colorama==0.4.6

cryptography==44.0.0

DateTime==5.5

debugpy==1.8.11

Django==5.0.4

django-cors-headers==4.6.0

django-filter==24.3

django-rest-knox==5.0.2

djangorestframework==3.15.2

drf-access-policy==1.5.0

gunicorn==22.0.0

h11==0.14.0

idna==3.10

packaging==24.0

pgOperations==0.0.3

psycopg2==2.9.10

pycparser==2.22

pyparsing==3.2.1

pytz==2025.1

requests==2.32.3

setuptools==75.8.0

six==1.17.0

sqlparse==0.5.3

typing\_extensions==4.11.0

tzdata==2025.1

urllib3==2.3.0

zope.interface==7.2

Vse je tu…

POVZETEK

PostgreSQL je treba instalirat kot pree-buildan paket (že zbildan)

***pip install psycopg2-binary==2.9.10***

***meni je manjkal še program*** pg\_config.exe, ki sem ga na roke skopiral iz obstoječe instalacije na C:\desweb\cop\venv\Scripts\bin in dodal to pot v PATH spremenljivko »environment variable« sistema Windows.

Preverim, ali so vsi instalirani paketi posodobljeni. Ni v navodilih…

(venv) C:\desweb\cop>***pip list outdatet***

Package Version

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asgiref 3.8.1

certifi 2025.1.31

cffi 1.17.1

charset-normalizer 3.4.1

click 8.1.7

colorama 0.4.6

cryptography 44.0.0

DateTime 5.5

debugpy 1.8.11

Django 5.0.4

django-cors-headers 4.6.0

django-filter 24.3

django-rest-knox 5.0.2

djangorestframework 3.15.2

drf-access-policy 1.5.0

gunicorn 22.0.0

h11 0.14.0

idna 3.10

packaging 24.0

pgOperations 0.0.3

pip 25.0.1

psycopg2 2.9.10

pycparser 2.22

pyparsing 3.2.1

pytz 2025.1

requests 2.32.3

setuptools 75.8.0

six 1.17.0

sqlparse 0.5.3

typing\_extensions 4.11.0

tzdata 2025.1

urllib3 2.3.0

zope.interface 7.2

Ups, kva smo to instalirali samo staro sranje. Za vse obstajajo novejši paketi…

Če bi se lotil posodabljanja bi moral najprej narediti: ***pip freeze >instaled.txt.*** Shranit trenutne verzije v zbirko. Potem z narediš posamezno posodobite npr: ***pip install --upgrade psycopg2***

*Lahko bi naredil novo zbirko requirements.txt z zadnjimi verzijami in od tam posodobil vse z ukazom:* **pip install --upgrade -r requirements.txt**

Za domačo nalogo pri geoportalih je bila ista naloga. Naredit virtualno okolje z vsemi paketi v zbirki requirements.txt. Zbirki sta povsem enaki. Lahko se znajdemo in skopiramo vsebino direktorija, ko smo v šoli delali vaje: **C:\desweb\cop\venv\Lib\site-packages** na direktorij virtualnega okolja za domačo nalogo: **C:\pythonProjects\pointOperations\venv\Lib\site-packages.**

**Znajdi se, kdor se more!**

Bom dal ZIP zbirko site-packages.ZIP zraven na gitHUB.