

Pipe-and-Filter архитектура за проток на податоци

Чекор 1

Симнуваме [osmcovert64.exe](#) и [osmfilter.exe](#), и мапата на Македонија достапна на [OpenStreetMap](#).

Чекор 2

Фајлот со мапата на Македонија macedonia-latest.pbf, го конвертираме во .osm фајл со помош на osmconvert:

```
Please please tell me the name of the file you want to process:
macedonia-latest.pbf
Thanks!
-----
What may I do with this file?

  1  convert it to a different file format
  2  use an OSM Changefile to update this file
  3  use a border box to limit the geographical region
  4  use a border polygon file to limit the geographical region
  5  minimize file size by deleting author information
  6  display statistics of the file
To options 3 or 4 you may also choose:
  a  keep ways complete, even if they cross the border
  b  keep ways and areas complete, even if they cross the border

Please enter the number of one or more functions you choose:
1
All right.
-----
Please choose the output file format:

  1  .osm (standard XML format - results in very large files)
  2  .osm (binary format - allows fast)
  3  .pbf (standard binary format - results in small files)

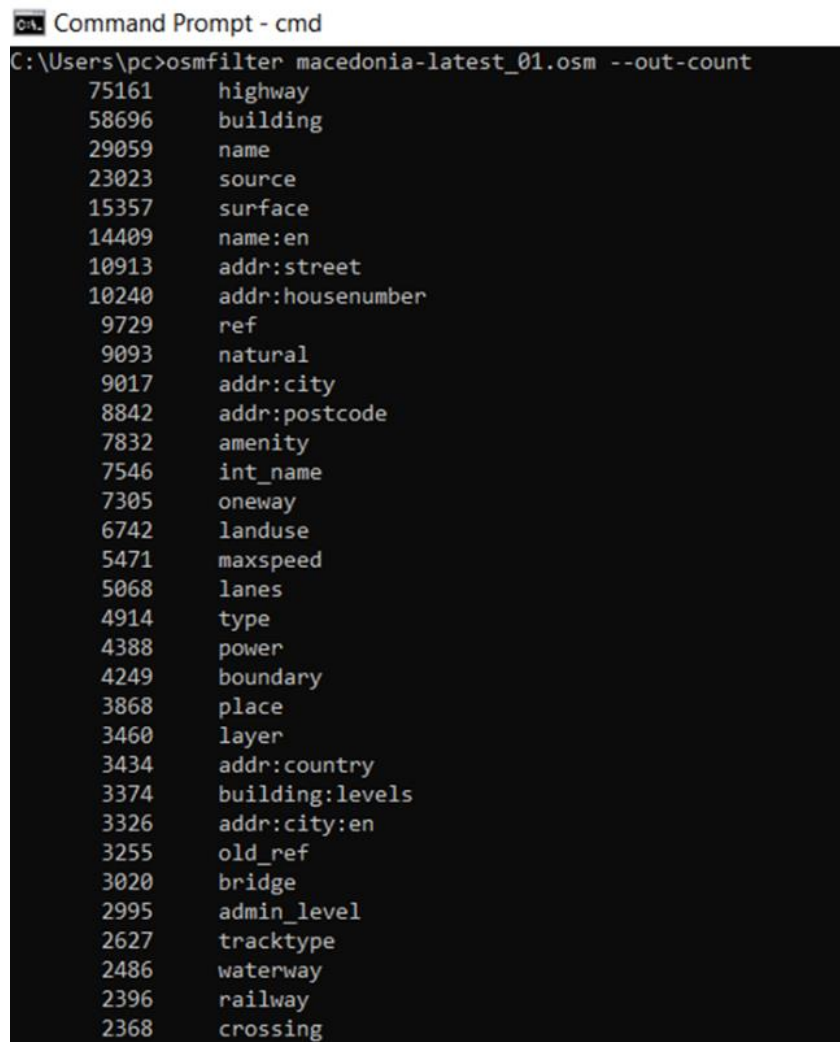
Enter 1, 2 or 3:
1
Thanks!
-----
Now, please hang on - I am working for you.
If the input file is very large, this will take several minutes.

If you want to get acquainted with the much more powerful
command line, this would have been your command:

osmconvert macedonia-latest.pbf --out-osm -o=macedonia-latest_01.osm
-----
Finished! Calculation time: 7s.
I just completed your new file with this name:
  macedonia-latest_01.osm
```

Чекор 3

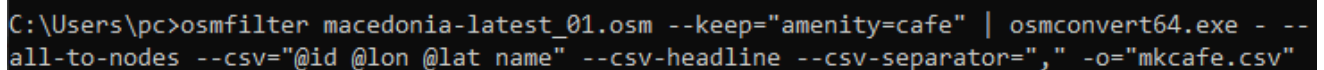
Командата **osmfilter macedonia-latest_01.osm --out-count** ни ги покажува сите можни податоци на мапата на Македонија:



```
Command Prompt - cmd
C:\Users\pc>osmfilter macedonia-latest_01.osm --out-count
75161 highway
58696 building
29059 name
23023 source
15357 surface
14409 name:en
10913 addr:street
10240 addr:housenumber
9729 ref
9093 natural
9017 addr:city
8842 addr:postcode
7832 amenity
7546 int_name
7305 oneway
6742 landuse
5471 maxspeed
5068 lanes
4914 type
4388 power
4249 boundary
3868 place
3460 layer
3434 addr:country
3374 building:levels
3326 addr:city:en
3255 old_ref
3020 bridge
2995 admin_level
2627 tracktype
2486 waterway
2396 railway
2368 crossing
```

Чекор 4

За нашиот проект избравме да ги изфилтрираме и извадime само кафулињата со помош на следнава команда и во исто време податоците ги конвертираме и ги запишуваме во нашата локална база во .csv формат:



```
C:\Users\pc>osmfilter macedonia-latest_01.osm --keep="amenity=cafe" | osmconvert64.exe - --all-to-nodes --csv="@id @lon @lat name" --csv-headline --csv-separator="," -o="mkcafe.csv"
```

Базата mkcafe.csv е достапна во папката database и изгледа вака:

	A	B	C	D
1	@id	@lon	@lat	name
2	310289760	21.416703	42.0001541	Broz Cafe
3	382650535	22.0110153	41.4372049	Total
4	382650733	22.0110601	41.437027	Roma
5	386703438	22.0131384	41.4352466	Blue Cafe
6	386704854	22.0104295	41.4398268	Picasso
7	411008299	21.4232268	41.9948867	Benneton
8	411008532	21.4230113	41.9948604	AMG
9	411009859	21.4253358	41.9955693	Strip
10	414619173	21.2168806	41.5069813	First
11	414620827	21.2165604	41.5133537	Kardinal
12	441057694	21.4082395	42.0051454	Cafeteria
13	444537212	22.4107281	41.9176649	Delikates Cafe
14	459670767	21.4310013	41.9952414	Caffe Skopje
15	459670881	21.429836	41.992653	Play Cafe
16	459752642	21.4373453	41.9984414	Bistro Opera Pub
17	461659372	22.6389491	41.4389263	City Cafe
18	461659456	22.6390517	41.4390994	Inside Cafe
19	461659572	22.6390002	41.4390286	Inside Cafe
20	461660689	22.637799	41.4397692	Extreme Cafe
21	461660729	22.6377556	41.4397043	PR Cafe
22	461660842	22.6378848	41.4395247	Cafe 19
23	470029606	22.3362079	42.2056104	Galerija
24	470029612	22.3365517	42.2058845	Fashion cafe
25	529811246	22.0167719	41.4343878	Light Cofee
26	572386052	20.6763146	41.1776197	Leone
27	990397203	22.1926393	41.7427284	Angel's Caffe
28	1233405188	22.8383014	41.7381241	miss Stoun
29	1615830879	21.398346	42.0034224	Fluid