

# Leaflet Web Maps with qgis2leaf

## QGIS Tutorials and Tips



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# Leaflet Web Maps with qgis2leaf

## Warning

qgis2leaf plugin is no longer in active development. The functionality of this plugin is folded into a new plugin called **qgis2web**.

See [Web Mapping with QGIS2Web](#) tutorial for an updated version of this tutorial.

Leaflet is a popular open-source Javascript library for building web mapping applications. **qgis2leaf** plugin provides a simple way to export your QGIS map to a functioning leaflet-based web map. This plugin is a useful way to get started with web mapping and create an interactive web map from your static GIS data layers.

## Overview of the task

We will create a leaflet web map of world's airports.

## Other skills you will learn

- Using CASE SQL statement in Field Calculator to create new field values based on different conditions.
- Locating and using SVG custom icons in QGIS.

## Get the data

We will use the [Airports](#) dataset from Natural Earth.

Download the [Airports shapefile](#).

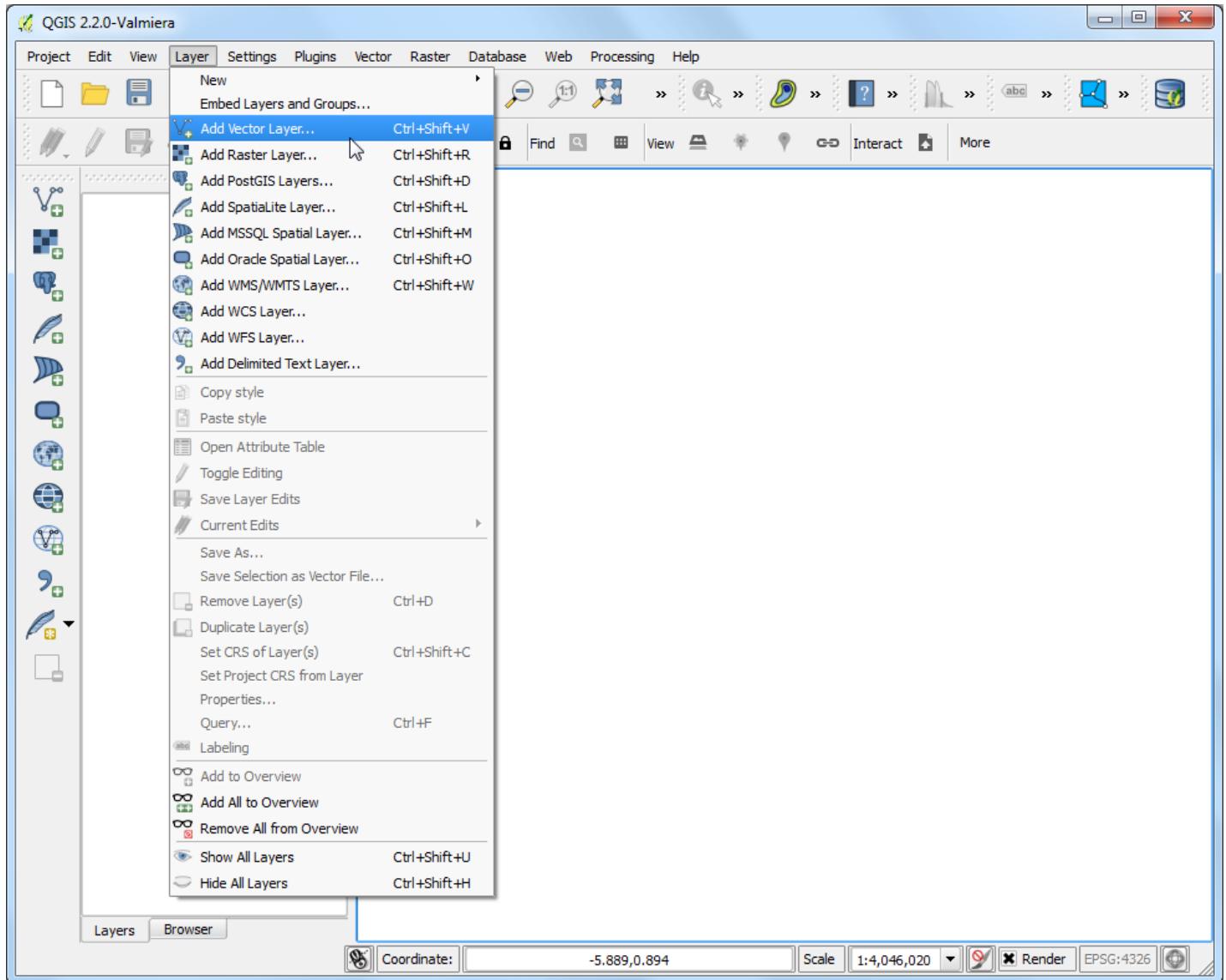
Data Source [NATURALEARTH]

## Procedure

1. Install the `qgis2leaf` plugin by going to Plugins > Manage and Install Plugin. Note that the plugin is currently marked **experimental**, so you will need to check Show also experimental plugins in Plugin Settings. (See [Using Plugins](#) for more details on installing plugins in QGIS)



2. Unzip the downloaded `ne_10m_airports.zip` file. Open QGIS and go to Layer ▶ Add Vector Layer. Browse to the location when the files were extracted and select `ne_10m_airports.shp`. Click OK.



3. Once the `ne_10m_airports` layer is loaded, use the Identify tool to click on any feature and look at the attributes. We will create an airport map where we classify the airports into 3 categories. The attribute type will be useful when classifying the features.



4. Right-click the `ne_10m_airports` layer and select Open Attribute Table.



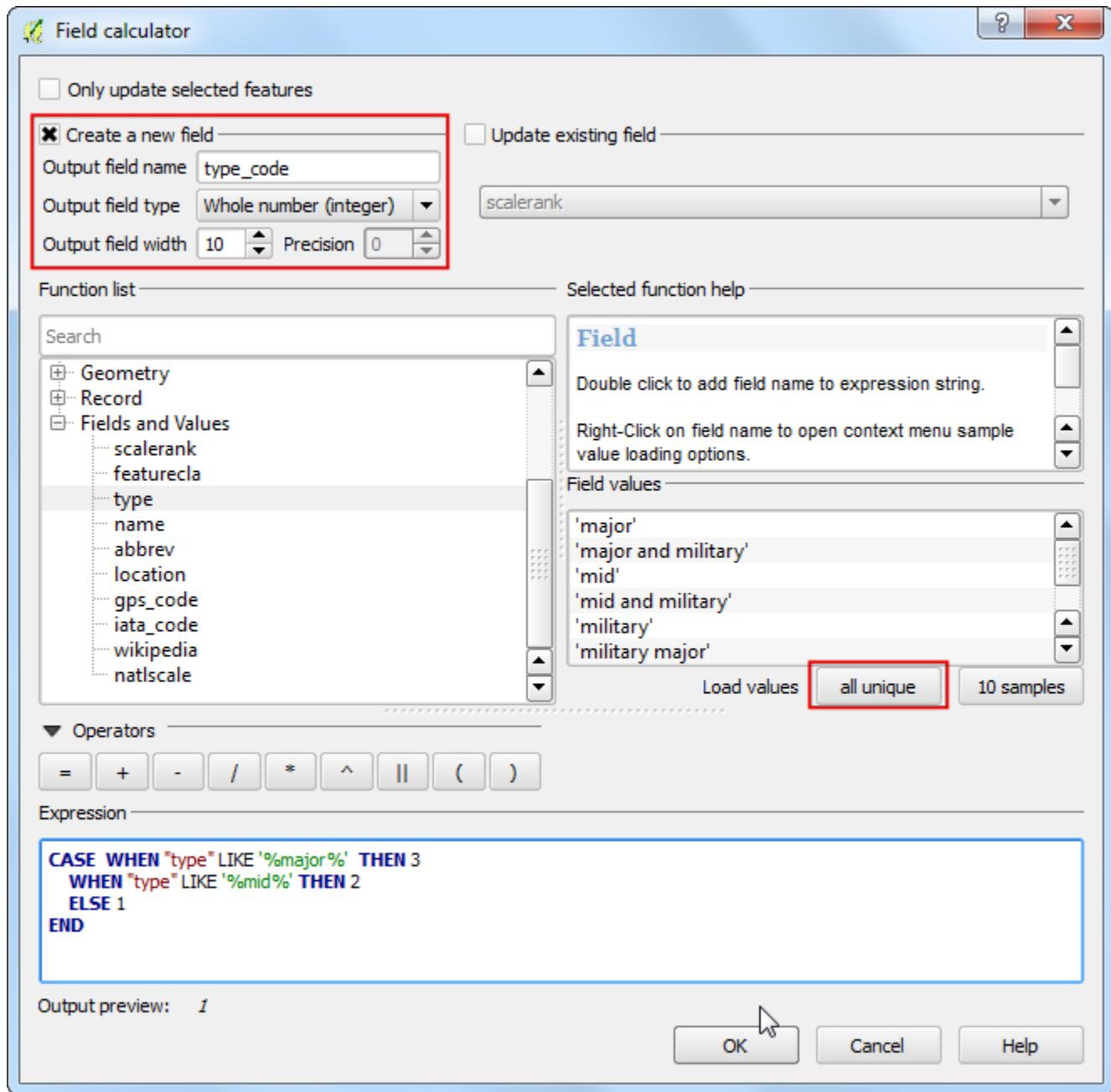
5. In the attribute table dialog, click the Toggle Editing button. Once the layer is in editing mode, click the Open Field Calculator button.

Attribute table - ne\_10m\_airports :: Features total: 891, filtered: 891, selected: 0

	scalerank	featured	type	name		Open field calculator (Ctrl+I)	gps_code	iata_code	wikidata
27	9	Airport	mid and military	Gwangju	KWJ	terminal	RKJJ	KWJ	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
28	9	Airport	mid	Daegu Int'l	TAE	terminal	RKTN	TAE	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
29	9	Airport	mid	Ulsan	USN	terminal	RKPU	USN	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
30	9	Airport	mid	Radin Inten II	WIIT	terminal	WIAT	TKG	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
31	9	Airport	military	Allahabad	IXD	ramp	VIAL	IXD	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
32	9	Airport	mid	Chelyabinsk	CEK	terminal	USCC	CEK	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
33	8	Airport	military mid	Tainan	TNN	ramp	RCNN	TNN	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
34	8	Airport	military mid	Taichung	RMQ	ramp	RCMQ	RMQ	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
35	8	Airport	mid	Rotterdam The H...	RTM	terminal	EHRD	RTM	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
36	8	Airport	mid	Voronezh-Cherto...	VOZ	terminal	UUOO	VOZ	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
37	8	Airport	major	Liverpool John Le...	LPL	ramp	EGGP	LPL	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
38	8	Airport	mid	Vishakapatnam	VTZ	terminal	VEVZ	VTZ	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
39	8	Airport	major	Sultan Hasanuddin	UPG	terminal	WAAA	UPG	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
40	8	Airport	mid	Vava'u Int'l	VAV	terminal	NFTV	VAV	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
41	8	Airport	major	Newcastle Int'l	NCL	terminal	EGNT	NCL	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
42	8	Airport	mid	Goloson Int'l	LCE	terminal	MHLC	LCE	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
43	8	Airport	major	Madinah Int'l	MED	terminal	OEMA	MED	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
44	8	Airport	mid	Mirabel Int'l	YMX	terminal	CYMX	YMX	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
45	8	Airport	mid	Palanga Int'l	PLQ	terminal	EYPA	PLQ	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
46	8	Airport	mid	Jaipur Int'l	JAI	terminal	VIJP	JAI	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
47	8	Airport	mid	Sonari	IXW	terminal	VEJS	IXW	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
48	8	Airport	mid	Yenisehir	YEI	ramp	LTBR	YEI	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>
49	8	Airport	major	Sakirpasa	ADA	terminal	LTAF	ADA	<a href="http://en.wikipedia.org">http://en.wikipedia.org</a>

6. We want to create a new attribute called `type_code` where we give major airports a value of 3, mid-sized airports a value of 2 and all others a value of 1. We can use the `CASE` statement and write an expression that will look at the value of `type` attribute and create a `type_code` attribute based on the condition. Check the Create a new field box and enter `type_code` as the Output field name. Select Whole number (integer) as the Output field type. In the Expression window, enter the following text.

```
CASE WHEN "type" LIKE '%major%' THEN 3
      WHEN "type" LIKE '%mid%' THEN 2
      ELSE 1
END
```

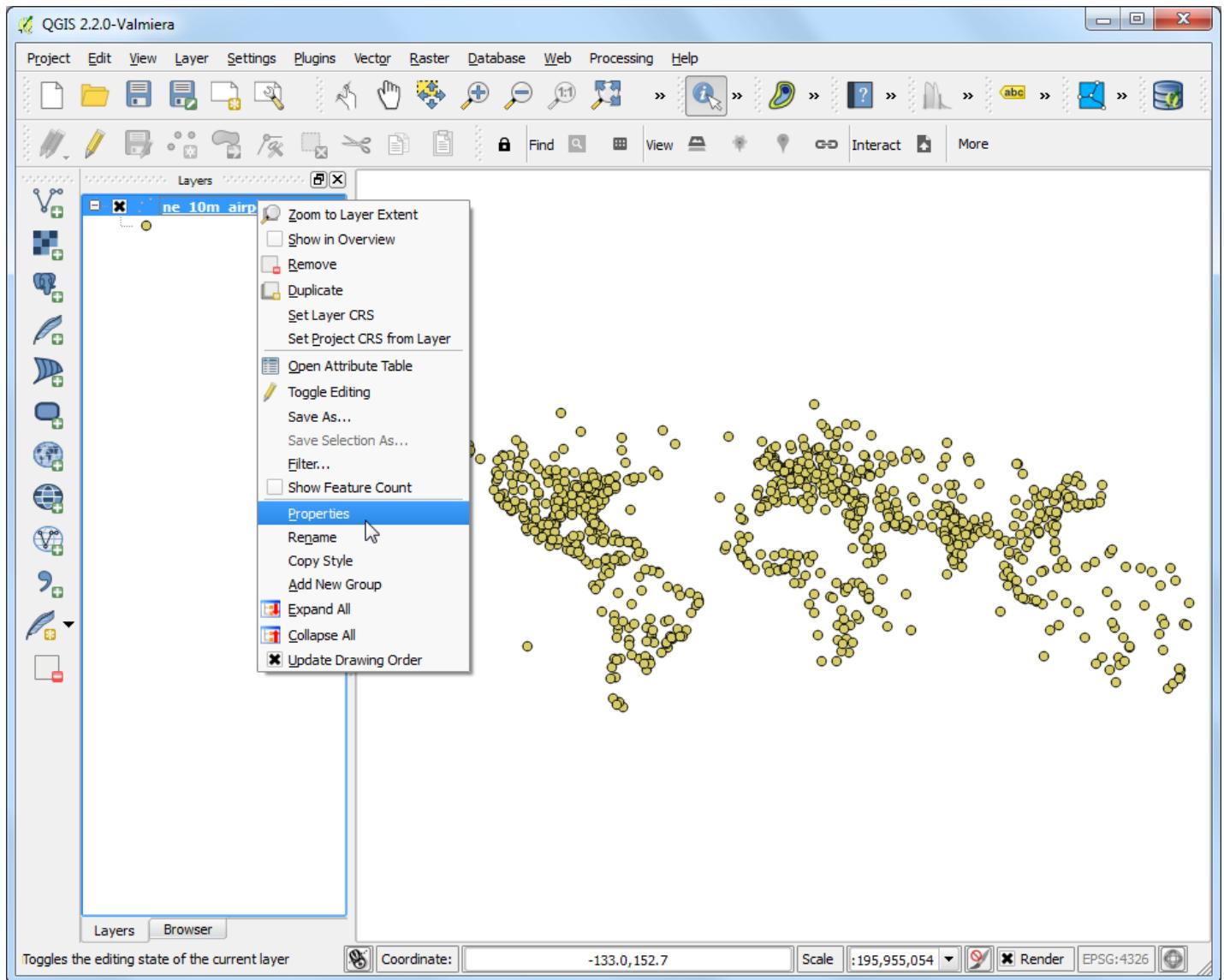


7. Back in the Attribute Table window, you will see a new column at the end. Verify that your expression worked correctly and click the Toggle Editing button to save the changes.

Attribute table - ne\_10m\_airports :: Features total: 891, filtered: 891, selected: 0

	#	name	abbrev	location	gps_code	iata_code	wikipedia	natscale	type_code
448		Aba Tenna D. Yil...	DIR	terminal	HADR	DIR	http://en.wikiped...	20.000	2
21		Abdul Rachman S...	MLG	ramp	WARA	MLG	http://en.wikiped...	8.000	2
626		Abidjan Port Bouet	ABJ	terminal	DIAP	ABJ	http://en.wikiped...	50.000	2
554		Abu Dhabi Int'l	AUH	terminal	OMAA	AUH	http://en.wikiped...	20.000	3
565		Abuja Int'l	ABV	terminal	DNAA	ABV	http://en.wikiped...	30.000	3
193		Achmad Yani	SRG	terminal	WARS	SRG	http://en.wikiped...	10.000	2
23		Adampur	VIAX	runway	VIAX	NULL	NULL	8.000	2
631		Adelaide Int'l	ADL	terminal	YPAD	ADL	http://en.wikiped...	50.000	2
333		Aden Adde Int'l	MGQ	runway	HCMM	MGQ	http://en.wikiped...	15.000	2
630		Aden Int'l	ADE	terminal	OYAA	ADE	http://en.wikiped...	50.000	2
417		Adnan Menderes	ADB	terminal	LTBJ	ADB	http://en.wikiped...	20.000	3
378		Aeroport Tunis	TUN	terminal	DTTA	TUN	http://en.wikiped...	15.000	3
805		Aeroportul Natio...	BBU	terminal	LRBS	BBU	http://en.wikiped...	75.000	2
784		Afonso Pena Int'l	CWB	terminal	SBCT	CWB	http://en.wikiped...	50.000	2
271		Agra	AGR	runway	VIAG	AGR	http://en.wikiped...	10.000	3
3		Ahwaz	AWZ	terminal	OIAW	AWZ	http://en.wikiped...	8.000	2
529		Albany Int'l	ALB	terminal	KALB	ALB	http://en.wikiped...	20.000	2
290		Albenga	ALL	ramp	LIMG	ALL	http://en.wikiped...	15.000	2
423		Albuquerque Int'l	ABQ	terminal	KABQ	ABQ	http://en.wikiped...	20.000	3
634		Aleppo Int'l	ALP	terminal	OSAP	ALP	http://en.wikiped...	50.000	3
659		Alfonso Bonilla Ar...	CLO	terminal	SKCL	CLO	http://en.wikiped...	50.000	2
261		Alicante	ALC	terminal	LEAL	ALC	http://en.wikiped...	10.000	3
52		Alice Springs	ASP	terminal	YBAS	ASP	http://en.wikiped...	10.000	2

8. Now we will style the airports layer using the newly created `type_code` attribute. Right-click the `ne_10m_airports` layer and select Properties.



9. Select the Style tab in the Layer Properties dialog. Select Categorized style from the drop-down menu and choose `type_code` as the Column. Choose a color ramp of your choice and click Classify. Click OK to go back to the main QGIS window.



10. Here you will see a nicely styled airport map. Let's export this to create an interactive web map. Go to Web ▶ qgis2leaf ▶ Exports a QGIS Project to a working leaflet webmap.



11. In the QGIS 2 Leaflet dialog, click Get Layers to get the refreshed layer list. Select the Full screen option to have a full screen web map. Choose layer extent as the Extent of the exported map. Choose a Output project folder on your system where the plugin will write the output files. Click OK.



12. Once the export process finishes, locate the output folder on your disk. Open the `index.html` file in a browser. You will see an interactive web map that is a replica of the QGIS map. You can zoom and pan around the map and also click on any feature to get an popup window with attribute information. You can copy the contents of this folder to a web server to have a full featured web map.



13. Now we will explore some advanced features of this plugin that will allow you to customize the map further. If you noticed, the popup contained all the attributes of the feature. Some attributes are not very useful and overall the pop up looks ugly. We can replace the default popup with our own custom HTML to make it much better. This is achieved by added the custom HTML in a column named `html_exp`. Right-click the `ne_10m_airports` layer and select Open Attribute Table.



14. In the attribute table dialog, click the Toggle Editing button. Once the layer is in editing mode, click the Open Field Calculator button.

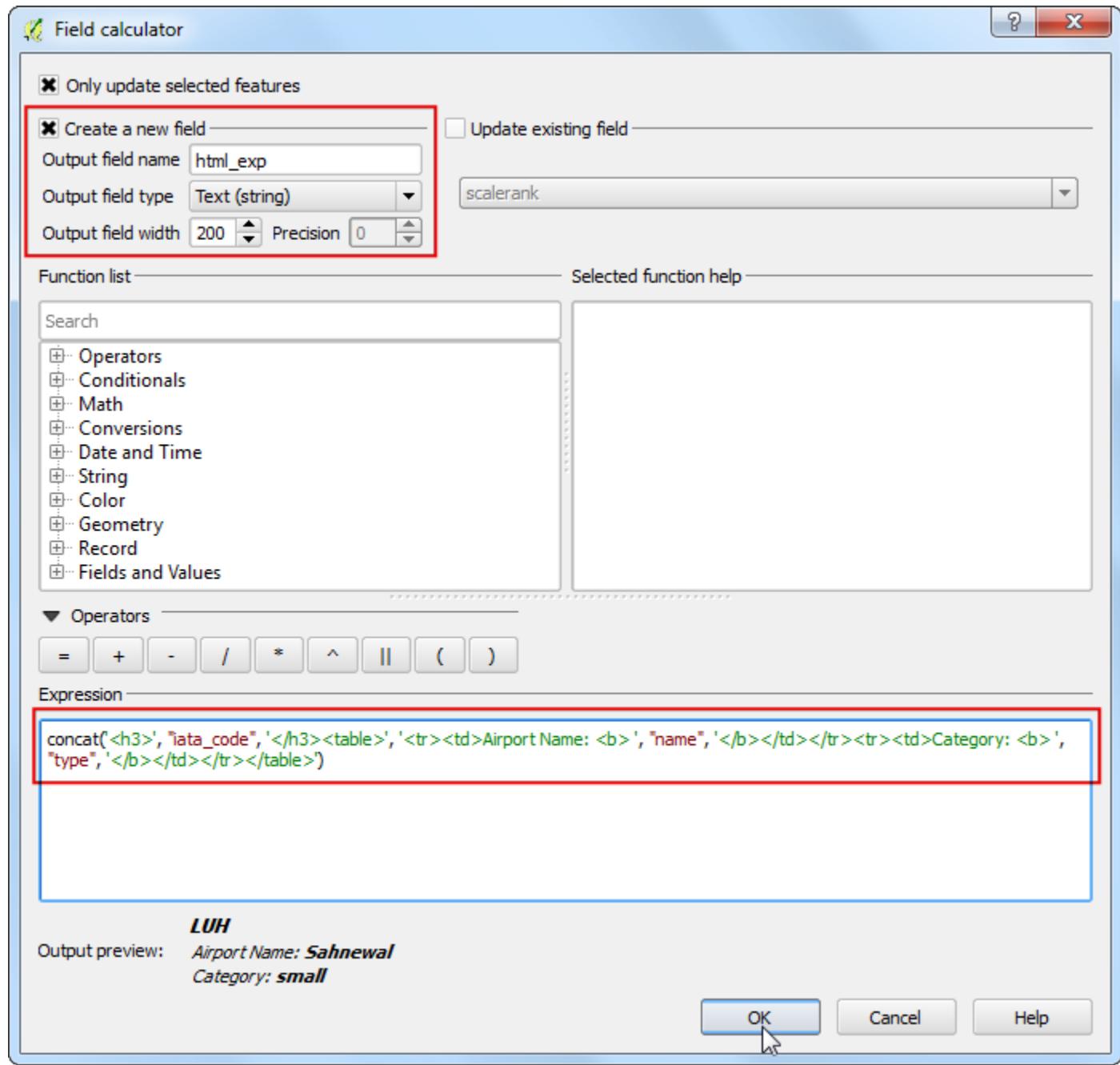
	scalarank	featuredda	type	name	Open field calculator (Ctrl+I)	gps_code	iata_code	wiki
0	9	Airport	small	Sahnewal	LUH	terminal	VILD	LUH
1	9	Airport	mid	Solapur	SSE	terminal	VASL	SSE
2	9	Airport	mid	Birsra Munda	IXR	terminal	VERC	IXR
3	9	Airport	mid	Ahwaz	AWZ	terminal	OIAW	AWZ
4	9	Airport	mid and military	Gwalior	GWL	terminal	VIGR	GWL
5	9	Airport	mid	Hodeidah Int'l	HOD	terminal	OYHD	HOD
6	9	Airport	mid	Devi Ahilyabai Ho...	IDR	terminal	VAID	IDR
7	9	Airport	mid	Gandhinagar	ISK	ramp	VANR	ISK
8	9	Airport	major and military	Chandigarh Int'l	IXC	terminal	VICG	IXC
9	9	Airport	mid	Aurangabad	IXU	terminal	VAAU	IXU
10	9	Airport	mid and military	Faisalabad Int'l	LYP	terminal	OPFA	LYP
11	9	Airport	mid	Omsk Tsentralny	OMS	terminal	UNOO	OMS
12	9	Airport	mid	Novosibirsk Tolm...	OVB	terminal	UNNT	OVB
13	9	Airport	mid and military	Zaporozhye Int'l	OZH	runway	UKDE	OZH
14	9	Airport	mid	Simpang Tiga	PKU	terminal	WIBB	PKU
15	9	Airport	mid	Rota Int'l	ROP	terminal	PGRO	ROP
16	9	Airport	mid	Surgut	SGC	terminal	USRR	SGC
17	9	Airport	mid	Tiruchirappalli	TRZ	terminal	VOTR	TRZ
18	9	Airport	mid	Turbat Int'l	TUK	terminal	OPTU	TUK
19	9	Airport	mid	Quetta Int'l	UET	terminal	OPQT	UET
20	9	Airport	mid	Zahedan Int'l	ZAH	terminal	OIZH	ZAH
21	9	Airport	mid and military	Abdul Rachman S...	MLG	ramp	WARA	MLG
22	9	Airport	mid	Barnaul	BAX	ramp	UNBB	BAX

15. Check the Create a new field box and enter `html_exp` as the Output field name. Choose Text (string) as the Output field type. Since we will be creating a long HTML string, choose 200 as the Output field width. Enter the following expression in the Expression area. The complex-looking expression simply defines a HTML table and substitutes cell values from attributes `iata_code`, `name` and `type`. Check the Output preview to ensure the expression is correct.

```
concat('<h3>', "iata_code", '</h3><table>', '<tr><td>Airport Name: <b> ', "name", '</b></td></tr><tr><td>Category: <b> ', "type", '</b></td></tr></table>')
```

### Note

The shapefile format can contain a maximum of 254 characters in a field. If you want to store longer text in the field, choose another format.



16. Back in the Attribute Table window, you will see a new column at the end. Verify that your expression worked correctly and click the Toggle Editing button to save the changes.

Attribute table - ne\_10m\_airports :: Features total: 891, filtered: 891, selected: 0

The screenshot shows the QGIS Attribute Table dialog for the 'ne\_10m\_airports' layer. The table lists 891 features, all of which are currently selected. The columns represent various attributes: location, gps\_code, iata\_code, wikipedia, natlscale, type\_code, and html\_exp. The 'location' column contains values like LUH, SSE, IXR, AWZ, GWL, HOD, IDR, ISK, IXC, IXU, LYP, OMS, OVB, OZH, PKU, ROP, SGC, TRZ, TUK, UET, ZAH, MLG, and BAX. The 'gps\_code' column contains codes like VILD, VASL, VERC, OIAW, VIGR, OYHD, VAID, VANR, VICG, VAAU, OPFA, UNOO, UNNT, UKDE, WIBB, PGRO, USRR, VOTR, OPTU, OPQT, OIZH, MLG, and UNBB. The 'iata\_code' column contains codes like LUH, SSE, IXR, AWZ, GWL, HOD, IDR, ISK, IXC, IXU, LYP, OMS, OVB, OZH, PKU, ROP, SGC, TRZ, TUK, UET, ZAH, MLG, and BAX. The 'wikipedia' column contains URLs starting with 'http://en.wikipedia.org/wiki/'. The 'natlscale' column has a value of 8.000 for all entries. The 'type\_code' column has values ranging from 1 to 3. The 'html\_exp' column contains HTML snippets such as '<h3>LUH</h3>', '<h3>SSE</h3>', '<h3>IXR</h3>', '<h3>AWZ</h3>', '<h3>GWL</h3>', '<h3>HOD</h3>', '<h3>IDR</h3>', '<h3>ISK</h3>', '<h3>IXC</h3>', '<h3>IXU</h3>', '<h3>LYP</h3>', '<h3>OMS</h3>', '<h3>OVB</h3>', '<h3>OZH</h3>', '<h3>PKU</h3>', '<h3>ROP</h3>', '<h3>SGC</h3>', '<h3>TRZ</h3>', '<h3>TUK</h3>', '<h3>UET</h3>', '<h3>ZAH</h3>', '<h3>MLG</h3>', and '<h3>BAX</h3>'.

	location	gps_code	iata_code	wikipedia	natlscale	type_code	html_exp
0	LUH	VILD	LUH	http://en.wikipedia.org/wiki/LUH	8.000	1	<h3>LUH</h3>...
1	SSE	VASL	SSE	http://en.wikipedia.org/wiki/SSE	8.000	2	<h3>SSE</h3>...
2	IXR	VERC	IXR	http://en.wikipedia.org/wiki/IXR	8.000	2	<h3>IXR</h3>...
3	AWZ	OIAW	AWZ	http://en.wikipedia.org/wiki/AWZ	8.000	2	<h3>AWZ</h3>...
4	GWL	VIGR	GWL	http://en.wikipedia.org/wiki/GWL	8.000	2	<h3>GWL</h3>...
5	Int'l	OYHD	HOD	http://en.wikipedia.org/wiki/HOD	8.000	2	<h3>HOD</h3>...
6	Boai Ho...	IDR	IDR	http://en.wikipedia.org/wiki/IDR	8.000	2	<h3>IDR</h3>...
7	Ar	VAID	VAID	http://en.wikipedia.org/wiki/VAID	8.000	2	<h3>ISK</h3>...
8	Int'l	VANR	ISK	http://en.wikipedia.org/wiki/ISK	8.000	3	<h3>IXC</h3>...
9	Id	VICG	IXC	http://en.wikipedia.org/wiki/IXC	8.000	2	<h3>IXU</h3>...
10	Int'l	VAAU	IXU	http://en.wikipedia.org/wiki/IXU	8.000	2	<h3>LYP</h3>...
11	Tolm...	OPFA	LYP	http://en.wikipedia.org/wiki/LYP	8.000	2	<h3>OMS</h3>...
12	ralny	UNOO	OMS	http://en.wikipedia.org/wiki/OMS	8.000	2	<h3>OVB</h3>...
13	Int'l	UNNT	OVB	http://en.wikipedia.org/wiki/OVB	8.000	2	<h3>OZH</h3>...
14	Int'l	UKDE	OZH	http://en.wikipedia.org/wiki/OZH	8.000	2	<h3>PKU</h3>...
15	Int'l	WIBB	PKU	http://en.wikipedia.org/wiki/PKU	8.000	2	<h3>ROP</h3>...
16	Int'l	PGRO	ROP	http://en.wikipedia.org/wiki/ROP	8.000	2	<h3>SGC</h3>...
17	Int'l	USRR	SGC	http://en.wikipedia.org/wiki/SGC	8.000	2	<h3>TRZ</h3>...
18	Int'l	VOTR	TRZ	http://en.wikipedia.org/wiki/TRZ	8.000	2	<h3>TUK</h3>...
19	Int'l	OPTU	TUK	http://en.wikipedia.org/wiki/TUK	8.000	2	<h3>UET</h3>...
20	Int'l	OPQT	UET	http://en.wikipedia.org/wiki/UET	8.000	2	<h3>ZAH</h3>...
21	man S...	OIZH	ZAH	http://en.wikipedia.org/wiki/ZAH	8.000	2	<h3>MLG</h3>...
22	BAX	WARA	MLG	http://en.wikipedia.org/wiki/MLG	8.000	2	<h3>BAX</h3>...

17. Now export the map again using Web ▶ qgis2leaf ▶ Exports a QGIS Project to a working leaflet webmap.



18. Choose the options as before.



19. Go to the output folder once the export process finishes. You will have a subfolder with the present timestamp. Locate the `index.html` file inside it and open it in a browser. Click on any feature and look at the popup. You will notice that it looks a lot cleaner and informative.



20. Another useful feature of the `qgis2leaf` plugin is the ability to specify a custom icon to use with the web map. This is accomplished by specifying the path to the custom icon in a field called `icon_exp`. We will create a new layer containing only the major airports and style using a custom SVG icon. Locate the Select features using an expression tool from the toolbar.



21. Enter the expression below and press Select to select all major airports.

```
"type_code" = 3
```



22. Right-click the ne\_10m\_airports airports and select Save Selection As....



23. In the Save vector layer as... dialog, name the output file as `major_airports.shp`. Check the Add saved file to map and click OK.



24. Once the `major_airports` layer is loaded in QGIS, right-click it and select Open Attribute Table.



25. In the attribute table dialog, click the Toggle Editing button. Once the layer is in editing mode, click the Open Field Calculator button.



The screenshot shows the ArcGIS Attribute Table window for the 'major\_airports' feature class. The table has columns for 'scalerank', 'featured', 'type', 'name', 'terminal', 'gps\_code', 'iata\_code', and 'wiki'. The 'type' column contains values like 'Airport', 'major', and 'major and military'. The 'name' column lists various airport names. The 'terminal' column contains values like 'IXC', 'CJJ', 'LPL', etc. The 'gps\_code' column contains codes like 'VICG', 'RKTU', 'EGGP', etc. The 'iata\_code' column contains codes like 'IXC', 'CJJ', 'LPL', etc. The 'wiki' column contains URLs starting with 'http://en.wikipedia.org/wiki/'. The 'Open field calculator (Ctrl+I)' button is highlighted with a red circle. The 'Show All Features' button is also visible.

	scalerank	featured	type	name	terminal	gps_code	iata_code	wiki
0	9	Airport	major and military	Chandigarh Int'l	IXC	VICG	IXC	<a href="http://en.wikipedia.org/wiki/Chandigarh_International_Airport">http://en.wikipedia.org/wiki/Chandigarh_International_Airport</a>
1	9	Airport	major	Cheongju Int'l	CJJ	RKTU	CJJ	<a href="http://en.wikipedia.org/wiki/Cheongju_International_Airport">http://en.wikipedia.org/wiki/Cheongju_International_Airport</a>
2	8	Airport	major	Liverpool John Le... ...	LPL	EGGP	LPL	<a href="http://en.wikipedia.org/wiki/Liverpool_John_League_Airport">http://en.wikipedia.org/wiki/Liverpool_John_League_Airport</a>
3	8	Airport	major	Sultan Hasanuddi...	UPG	WAAA	UPG	<a href="http://en.wikipedia.org/wiki/Sultan_Hasanuddin_Airport">http://en.wikipedia.org/wiki/Sultan_Hasanuddin_Airport</a>
4	8	Airport	major	Newcastle Int'l	NCL	EGNT	NCL	<a href="http://en.wikipedia.org/wiki/Newcastle_Upon_Tyne_International_Airport">http://en.wikipedia.org/wiki/Newcastle_Upon_Tyne_International_Airport</a>
5	8	Airport	major	Madinah Int'l	MED	OEMA	MED	<a href="http://en.wikipedia.org/wiki/Madinah_Munawwarah_Airport">http://en.wikipedia.org/wiki/Madinah_Munawwarah_Airport</a>
6	8	Airport	major	Sakirpasa	ADA	LTAF	ADA	<a href="http://en.wikipedia.org/wiki/Sakirpasa_Airport">http://en.wikipedia.org/wiki/Sakirpasa_Airport</a>
7	8	Airport	major	Amarillo Int'l	AMA	KAMA	AMA	<a href="http://en.wikipedia.org/wiki/Amarillo_International_Airport">http://en.wikipedia.org/wiki/Amarillo_International_Airport</a>
8	8	Airport	major	Birmingham Int'l	BHM	KBHM	BHM	<a href="http://en.wikipedia.org/wiki/Birmingham_Bromsgrove_Airport">http://en.wikipedia.org/wiki/Birmingham_Bromsgrove_Airport</a>
9	8	Airport	major	Logan Int'l	BIL	KBIL	BIL	<a href="http://en.wikipedia.org/wiki/Logan_Airport">http://en.wikipedia.org/wiki/Logan_Airport</a>
10	8	Airport	major	Burgas	BOJ	LBBG	BOJ	<a href="http://en.wikipedia.org/wiki/Burgas_Airport">http://en.wikipedia.org/wiki/Burgas_Airport</a>
11	8	Airport	major	Bremen	BRE	EDDW	BRE	<a href="http://en.wikipedia.org/wiki/Bremen_Airport">http://en.wikipedia.org/wiki/Bremen_Airport</a>
12	8	Airport	major	Bristol Int'l	BRS	EGGD	BRS	<a href="http://en.wikipedia.org/wiki/Bristol_Beckton_Airport">http://en.wikipedia.org/wiki/Bristol_Beckton_Airport</a>
13	8	Airport	major	Baton Rouge Metro	BTR	KBTR	BTR	<a href="http://en.wikipedia.org/wiki/Baton_Rouge_Metro_Airport">http://en.wikipedia.org/wiki/Baton_Rouge_Metro_Airport</a>
14	8	Airport	major	Bratislava-M.R. S...	BTS	LZIB	BTS	<a href="http://en.wikipedia.org/wiki/Bratislava_Magyar_Róbert_Straßen_Airport">http://en.wikipedia.org/wiki/Bratislava_Magyar_Róbert_Straßen_Airport</a>
15	8	Airport	major	Columbia Metro	CAE	KCAE	CAE	<a href="http://en.wikipedia.org/wiki/Columbia_Metro_Airport">http://en.wikipedia.org/wiki/Columbia_Metro_Airport</a>
16	8	Airport	major	Calicut Int'l	CCJ	VOCL	CCJ	<a href="http://en.wikipedia.org/wiki/Calicut_Airport">http://en.wikipedia.org/wiki/Calicut_Airport</a>
17	8	Airport	major	Changchun Longj...	CGQ	ZYCC	CGQ	<a href="http://en.wikipedia.org/wiki/Changchun_Lóngjīn_Airport">http://en.wikipedia.org/wiki/Changchun_Lóngjīn_Airport</a>
18	8	Airport	major and military	Charleston Int'l	CHS	KCHS	CHS	<a href="http://en.wikipedia.org/wiki/Charleston_Airport">http://en.wikipedia.org/wiki/Charleston_Airport</a>
19	8	Airport	major	Casper/Natrona ...	CPR	KCPR	CPR	<a href="http://en.wikipedia.org/wiki/Casper_Natrona_County_Airport">http://en.wikipedia.org/wiki/Casper_Natrona_County_Airport</a>
20	8	Airport	major	Clark Int'l	CRK	RPLC	CRK	<a href="http://en.wikipedia.org/wiki/Clark_Airport">http://en.wikipedia.org/wiki/Clark_Airport</a>
21	8	Airport	major and military	Yeager	CRW	KCRW	CRW	<a href="http://en.wikipedia.org/wiki/Yeager_Airport">http://en.wikipedia.org/wiki/Yeager_Airport</a>
22	8	Airport	major	Catania Fontana...	CTA	LICC	CTA	<a href="http://en.wikipedia.org/wiki/Catania_Fontanarossa_Airport">http://en.wikipedia.org/wiki/Catania_Fontanarossa_Airport</a>

26. In Field Calculator dialog, enter `icon_exp` as the Output field name. Make it a Text (string) type. In the Expression area, enter the following expression.

```
'airport.svg'
```



27. Save your edits by clicking the Toggle Editing button in the Attribute Table.

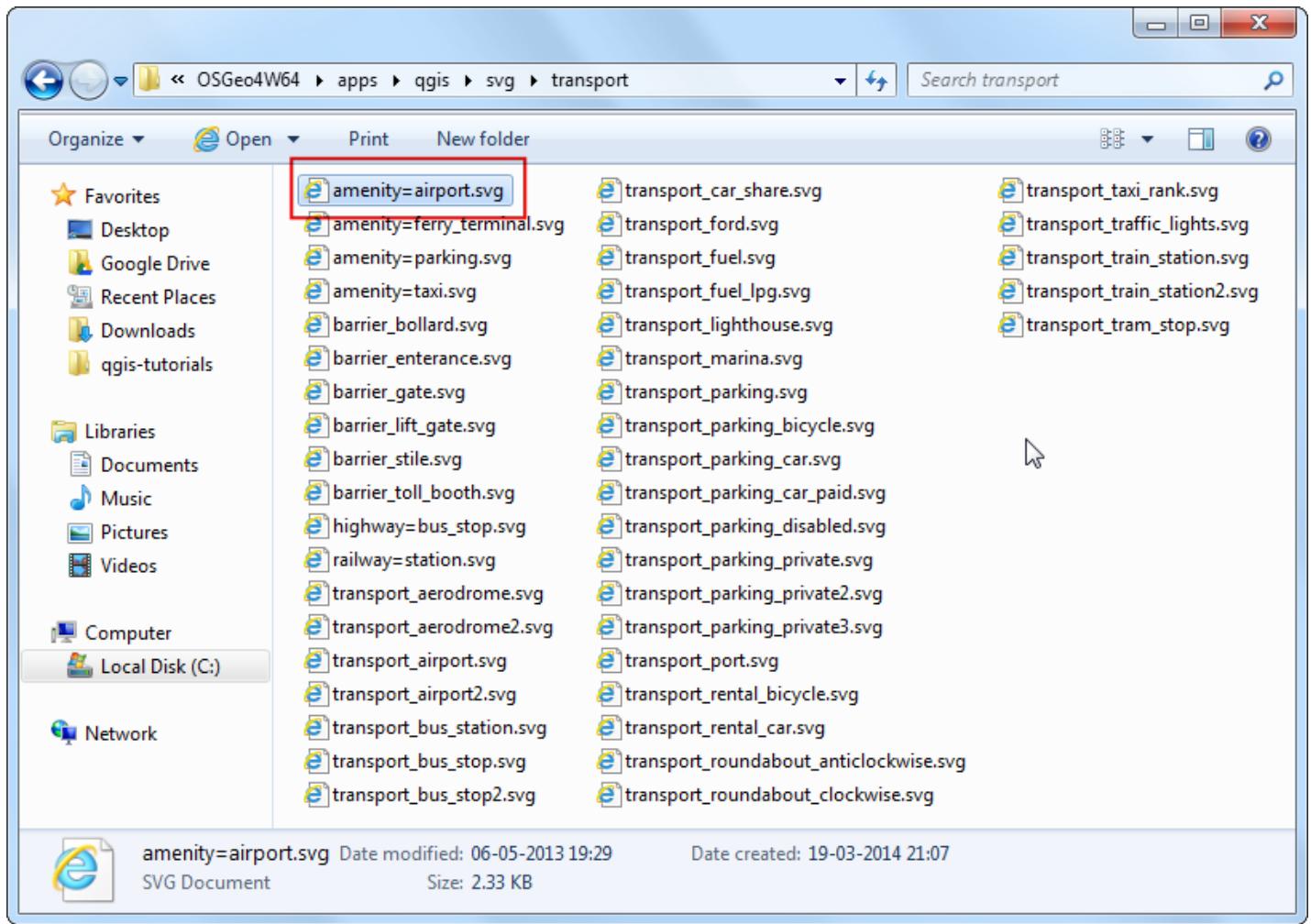
Attribute table - major\_airports :: Features total: 385, filtered: 385, selected: 0

fv	location	gps_code	iata_code	wikipedia	natlscale	type_code	html_exp	icon_exp
0	terminal	VICG	IXC	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	8.000	3	<h3>IXC</h3>... <img alt="IXC icon" data-bbox="850 115 875 130"/>	airport.svg
1	terminal	RKTU	CJJ	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	8.000	3	<h3>CJJ</h3>... <img alt="CJJ icon" data-bbox="850 135 875 150"/>	airport.svg
2	ramp	EGGP	LPL	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>LPL</h3>... <img alt="LPL icon" data-bbox="850 155 875 170"/>	airport.svg
3	terminal	WAAA	UPG	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>UPG</h3>... <img alt="UPG icon" data-bbox="850 175 875 190"/>	airport.svg
4	terminal	EGNT	NCL	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>NCL</h3>... <img alt="NCL icon" data-bbox="850 195 875 210"/>	airport.svg
5	terminal	OEMA	MED	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>MED</h3>... <img alt="MED icon" data-bbox="850 215 875 230"/>	airport.svg
6	terminal	LTAF	ADA	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>ADA</h3>... <img alt="ADA icon" data-bbox="850 235 875 250"/>	airport.svg
7	terminal	KAMA	AMA	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>AMA</h3>... <img alt="AMA icon" data-bbox="850 255 875 270"/>	airport.svg
8	terminal	KBHM	BHM	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BHM</h3>... <img alt="BHM icon" data-bbox="850 275 875 290"/>	airport.svg
9	terminal	KBIL	BIL	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BIL</h3>... <img alt="BIL icon" data-bbox="850 295 875 310"/>	airport.svg
10	ramp	LBBG	BOJ	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BOJ</h3>... <img alt="BOJ icon" data-bbox="850 315 875 330"/>	airport.svg
11	terminal	EDDW	BRE	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BRE</h3>... <img alt="BRE icon" data-bbox="850 335 875 350"/>	airport.svg
12	terminal	EGGD	BRS	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BRS</h3>... <img alt="BRS icon" data-bbox="850 355 875 370"/>	airport.svg
13	terminal	KBTR	BTR	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BTR</h3>... <img alt="BTR icon" data-bbox="850 375 875 390"/>	airport.svg
14	terminal	LZIB	BTS	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>BTS</h3>... <img alt="BTS icon" data-bbox="850 395 875 410"/>	airport.svg
15	terminal	KCAE	CAE	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CAE</h3>... <img alt="CAE icon" data-bbox="850 415 875 430"/>	airport.svg
16	terminal	VOCL	CCJ	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CCJ</h3>... <img alt="CCJ icon" data-bbox="850 435 875 450"/>	airport.svg
17	terminal	ZYCC	CGQ	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CGQ</h3>... <img alt="CGQ icon" data-bbox="850 455 875 470"/>	airport.svg
18	terminal	KCHS	CHS	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CHS</h3>... <img alt="CHS icon" data-bbox="850 475 875 490"/>	airport.svg
19	terminal	KCPR	CPR	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CPR</h3>... <img alt="CPR icon" data-bbox="850 495 875 510"/>	airport.svg
20	ramp	RPLC	CRK	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CRK</h3>... <img alt="CRK icon" data-bbox="850 515 875 530"/>	airport.svg
21	terminal	KCRW	CRW	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CRW</h3>... <img alt="CRW icon" data-bbox="850 535 875 550"/>	airport.svg
22	terminal	LICC	CTA	http://en.wikipedia.org/wi... kipedia?title=Category:Airpo...	10.000	3	<h3>CTA</h3>... <img alt="CTA icon" data-bbox="850 555 875 570"/>	airport.svg

28. Open the `qgis2leaf` plugin from Web ▶ `qgis2leaf` ▶ Exports a QGIS Project to a working leaflet webmap. Click Get Layers button to fetch both the layers from QGIS. There are many different pre-made tile layers available for basemaps. In this map, we can try something different and load the Stamen Watercolor as the Basemap. Click OK.



29. If you remember we specified `airport.svg` as the icon for the airports. We need to add that icon manually to the output directory. QGIS comes with a large collection of icons. On Windows, these icons are located at `C: > OSGEO4W64 > apps > qgis > svg`. The path may differ depending on your platform and install type. Locate that directory and choose an icon you like. For our map, we can try the `amenity=airport.svg` icon located under `transport` category.



30. Copy and paste this icon in the output directory you had specified when exporting the map. Rename it as `airport.svg`.



31. Now open the index.html file located in the folder. You will see a beautiful basemap with our custom icons for the major airports. Also notice the layer panel at top-right corner which has layer display control for both the layers.

