

1)

Установите Microsoft SQL Server вместе с Microsoft Analysis Services (ссылка).

Скачайте базу данных AdventureWorks (последняя была AdventureWorks2019) (ссылка).

Сервер отчетов Microsoft Power BI (ссылка).

Microsoft Power BI Desktop (ссылка).

И на основе данных из этой базы сделайте в Microsoft Excel (лучше в Microsoft Power BI) сводную таблицу и график.

Инструкции как устанавливать:

MS Excel

[https://www.youtube.com/watch?v=7GVFYt6\\_ZFM&ab\\_channel=kudvenkat](https://www.youtube.com/watch?v=7GVFYt6_ZFM&ab_channel=kudvenkat)

SSAS

<https://www.mssqltips.com/sqlservertip/6637/how-to-install-ssas-2019/>

!!!! не Tabular mode, а Multidimensional mode

Подтянул из базы данных AdventureWorks2019 таблицу Person.Address.

FileHomeHelpTable tools

Name

Person Address

Mark as date table

Manage relationships

New measure

Quick measure

New table

New table

StructureCalendarsRelationshipsCalculations

AddressID	AddressLine1	AddressLine2	City	StateProvinceID	PostalCode	SpatialLocation	rowguid	ModifiedDate
333	50 Edward Ave		Concord	9	94519	POINT (-122.216700411757 37.9376019131263)	E8E095F2-E14F-429D-829C-922E807B6D65	17.01.2012 0:00:00
354	5 Madrid		Concord	9	94519	POINT (-122.02079890947 37.9549855061301)	C13F0A83-2847-4718-90DD-081D73228C33	25.01.2012 0:00:00
11490	6270 North Star Dr.		Concord	9	94519	POINT (-122.16720922713 38.0271721652509)	E7061D00-1F9C-480D-8F31-3D5088CE7664	17.12.2013 0:00:00
11552	5805 Churchill Dr.		Concord	9	94519	POINT (-121.830187834024 37.971674210714)	587A0606-DA07-43B8-89C4-8500D9018CC7	21.12.2012 0:00:00
11751	9466 Morning Glory Dr.		Concord	9	94519	POINT (-121.902606600389 37.99351485254)	77D191AB-B53B-41E6-A061-2C3E148978F9	25.02.2012 0:00:00
11868	4352 Marclair Dr.		Concord	9	94519	POINT (-121.830573424156 37.9727943569569)	EEA848D7-7455-405C-AAFA-2737AC12C44C	20.01.2014 0:00:00
12095	1940 Detroit Ave.		Concord	9	94519	POINT (-121.954410380519 37.9012170459911)	993406D9-07AC-4184-AA9E-E992806756CC	24.05.2014 0:00:00
12111	5300 East 88th Street		Concord	9	94519	POINT (-121.8499868722 37.9891791867662)	1F1F95C0-EA33-411A-AF68-8EE23325CEEC	06.02.2014 0:00:00
12167	1944 Serene Court		Concord	9	94519	POINT (-122.06960234869 37.9815805910693)	90A8530B-D987-49AE-97AA-AA4DC510A90A5	20.02.2014 0:00:00
12206	8914 Elkwood Dr.		Concord	9	94519	POINT (-121.887762659548 38.0094149673882)	67F2F585-4EB3-4D63-8923-0F4EC311ACF5	03.11.2013 0:00:00
12279	712 Sweetwater Drive		Concord	9	94519	POINT (-122.16720922713 38.011974973857)	AA584B33-6E3C-4702-8143-543EB02ED738	12.05.2014 0:00:00
12354	5275 Whitehall Drive		Concord	9	94519	POINT (-121.89879031142 38.0195735695539)	20E63CF2-99EF-4B1C-BF8D-267D0D991F4C4	01.11.2013 0:00:00
12421	4535 Walnut Blvd.		Concord	9	94519	POINT (-122.04520062908 37.9891791867662)	FC411013-B7CE-437A-B643-22E25677B587	25.01.2014 0:00:00
12469	9950 Edward Ave		Concord	9	94519	POINT (-121.874972070283 38.0173745816129)	8EF10679-1E28-40DE-ADDD-E9115002C88A	08.11.2013 0:00:00
12750	3848 East 39th Street		Concord	9	94519	POINT (-121.92319203103 37.9929784846147)	71E92B02-0545-4DF1-8E19-6E9938EB4046	02.03.2014 0:00:00
12821	6973 Elena		Concord	9	94519	POINT (-121.8499868722 38.0043763781601)	A617C4D0-CAC7-4274-977D-5B8810C24887	04.10.2013 0:00:00
12890	7559 Worth Ct.		Concord	9	94519	POINT (-121.910991171225 38.0081756760085)	6CC77BF5-A349-4530-8D7C-E98D70BF8350	30.06.2013 0:00:00
12895	4861 Via Valencia		Concord	9	94519	POINT (-121.886589451615 37.9815805910693)	0612910C-F55E-4BA4-8803-33D686F31529	27.09.2011 0:00:00
13009	1828 Robinson Ave.		Concord	9	94519	POINT (-121.9332941803 37.9920861315999)	0E114A29-6CBA-4DDF-8CE9-3698BD2C8CD9	18.03.2014 0:00:00
13150	975 Madrid		Concord	9	94519	POINT (-122.008598049665 38.0347707609478)	029FF8E0-6ABD-46EF-8E66-E9D38C163D92	14.05.2014 0:00:00
13250	1569 Eagle Ct.		Concord	9	94519	POINT (-122.14280750752 38.0309714630993)	CDE77D62-2161-4F87-A89C-BD17AE643354	30.04.2014 0:00:00
13372	8740 Vista Way		Concord	9	94519	POINT (-122.191610946739 38.0005770803116)	619257F3-AF54-4574-A008-13C28E5B9FB2	19.10.2013 0:00:00
13425	5139 The Trees Dr		Concord	9	94519	POINT (-122.034492175171 37.9118482306531)	F6189AAE-7881-4040-8F32-3C4A77BF8277	29.11.2013 0:00:00
13441	4176 Alexander Pl		Concord	9	94519	POINT (-122.106204928105 38.0081756760085)	AEC9191E-45E0-463A-9918-B7D049A62730	05.08.2013 0:00:00
13498	4101 Buckthorn Court		Concord	9	94519	POINT (-122.003870017869 37.9374776340777)	3719DA66-320A-43FF-83DE-02B970B0FAEF	16.12.2013 0:00:00
13524	2206 Clear View Circle		Concord	9	94519	POINT (-122.155008367325 38.0195735695539)	5E939F03-9B04-42CD-AA48-1268F41BA8F1	12.11.2011 0:00:00
13574	9715 San Francisco		Concord	9	94519	POINT (-122.057401488885 38.0385700587962)	02F84362-28FC-4952-8804-C0DD3039E732	16.06.2014 0:00:00
13771	7917 Precipice Drive		Concord	9	94519	POINT (-122.02079890947 37.9853798889178)	C89CDEBF-C3FF-4F01-8148-8D76BED96268	17.05.2014 0:00:00
13928	535 La Salle Street		Concord	9	94519	POINT (-122.2249841874 37.963759597)	F9301D47-D41A-47B1-BEFD-0DF3E49CE24	14.11.2011 0:00:00
14007	1287 Youngsdaile Drive		Concord	9	94519	POINT (-122.16720922713 38.0499679523416)	149FA427-9648-48FB-9089-3A01ADADA56	28.09.2013 0:00:00
14170	2278 Rosa		Concord	9	94519	POINT (-122.0940040683 37.9435876125847)	02B81B50-4C4D-48B6-902C-8E1415CFBCA	11.02.2014 0:00:00
14287	9430 Thornhill Place		Concord	9	94519	POINT (-122.04520062908 37.9359890168878)	C8401005-C122-4E6E-9D14-423E9F3CA11B	11.03.2014 0:00:00
14305	5093 Greer Ave		Concord	9	94519	POINT (-121.955297221843 37.9049719120931)	DC946C0C-53B7-40F4-AD19-2431CD9F0289	05.11.2012 0:00:00
14321	7554 Grammercy Lane		Concord	9	94519	POINT (-121.850644919945 37.9953240559285)	E0188BE8-B049-4F17-B0B0-ED8750FF48D9	29.09.2011 0:00:00
14511	1292 Marsh Elder		Concord	9	94519	POINT (-121.891881941173 37.9695485417802)	7190267D-8417-4DCA-A13B-S171AA8FEAE1	05.06.2012 0:00:00
14586	8308 Fox Way		Concord	9	94519	POINT (-122.194086766004 37.9045004517969)	AD72D5055-9ADC-4F54-8954-86AC1C30CE47E	07.09.2013 0:00:00
14603	5338 MountainAir Parkway		Concord	9	94519	POINT (-121.862187732005 38.0309714630993)	90D25A5F-3D0B-482D-8A63-CF4F8EDBF8AE	15.11.2013 0:00:00
14611	2756 Sinclair Avenue		Concord	9	94519	POINT (-122.1363486889 37.9422981707)	83861BD6-DD92-4E33-9C02-66788D15F376	23.12.2013 0:00:00

Fields

Person Address

AddressID

AddressLine1

AddressLine2

City

ModifiedDate

PostalCode

rowguid

SpatialLocation

StateProvinceID

Table

Result

StateProvinceID

AddressID	AddressLine1	AddressLine2	City	StateProvinceID	PostalCode	SpatialLocation	rowguid	ModifiedDate
333	50 Edward Ave		Concord	9	94519	POINT (-122.216700411757 37.9376019131263)	E8E095F2-E14F-429D-829C-922E807B6D65	17.01.2012 0:00:00
354	5 Madrid		Concord	9	94519	POINT (-122.02079890947 37.9549855061301)	C13F0A83-2847-4718-90DD-081D73228C33	25.01.2012 0:00:00
11490	6270 North Star Dr.		Concord	9	94519	POINT (-122.16720922713 38.0271721652509)	E7061D00-1F9C-480D-8F31-3D5088CE7664	17.12.2013 0:00:00
11552	5805 Churchill Dr.		Concord	9	94519	POINT (-121.830187834024 37.971674210714)	587A0606-DA07-43B8-89C4-8500D9018CC7	21.12.2012 0:00:00
11751	9466 Morning Glory Dr.		Concord	9	94519	POINT (-121.902606600389 37.99351485254)	77D191AB-B53B-41E6-A061-2C3E148978F9	25.02.2012 0:00:00
11868	4352 Marclair Dr.		Concord	9	94519	POINT (-121.830573424156 37.9727943569569)	EEA848D7-7455-405C-AAFA-2737AC12C44C	20.01.2014 0:00:00
12095	1940 Detroit Ave.		Concord	9	94519	POINT (-121.954410380519 37.9012170459911)	993406D9-07AC-4184-AA9E-E992806756CC	24.05.2014 0:00:00
12111	5300 East 88th Street		Concord	9	94519	POINT (-121.8499868722 37.9891791867662)	1F1F95C0-EA33-411A-AF68-8EE23325CEEC	06.02.2014 0:00:00
12167	1944 Serene Court		Concord	9	94519	POINT (-122.06960234869 37.9815805910693)	90A8530B-D987-49AE-97AA-AA4DC510A90A5	20.02.2014 0:00:00
12206	8914 Elkwood Dr.		Concord	9	94519	POINT (-121.887762659548 38.0094149673882)	67F2F585-4EB3-4D63-8923-0F4EC311ACF5	03.11.2013 0:00:00
12279	712 Sweetwater Drive		Concord	9	94519	POINT (-122.16720922713 38.011974973857)	AA584B33-6E3C-4702-8143-543EB02ED738	12.05.2014 0:00:00
12354	5275 Whitehall Drive		Concord	9	94519	POINT (-121.89879031142 38.0195735695539)	20E63CF2-99EF-4B1C-BF8D-267D0D991F4C4	01.11.2013 0:00:00
12421	4535 Walnut Blvd.		Concord	9	94519	POINT (-122.04520062908 37.9891791867662)	FC411013-B7CE-437A-B643-22E25677B587	25.01.2014 0:00:00
12469	9950 Edward Ave		Concord	9	94519	POINT (-121.874972070283 38.0173745816129)	8EF10679-1E28-40DE-ADDD-E9115002C88A	08.11.2013 0:00:00
12750	3848 East 39th Street		Concord	9	94519	POINT (-121.92319203103 37.9929784846147)	71E92B02-0545-4DF1-8E19-6E9938EB4046	02.03.2014 0:00:00
12821	6973 Elena		Concord	9	94519	POINT (-121.8499868722 38.0043763781601)	A617C4D0-CAC7-4274-977D-5B8810C24887	04.10.2013 0:00:00
12890	7559 Worth Ct.		Concord	9	94519	POINT (-121.910991171225 38.0081756760085)	6CC77BF5-A349-4530-8D7C-E98D70BF8350	30.06.2013 0:00:00
12895	4861 Via Valencia		Concord	9	94519	POINT (-121.886589451615 37.9815805910693)	0612910C-F55E-4BA4-8803-33D686F31529	27.09.2011 0:00:00
13009	1828 Robinson Ave.		Concord	9	94519	POINT (-121.9332941803 37.9920861315999)	0E114A29-6CBA-4DDF-8CE9-3698BD2C8CD9	18.03.2014 0:00:00
13150	975 Madrid		Concord	9	94519	POINT (-122.008598049665 38.0347707609478)	029FF8E0-6ABD-46EF-8E66-E9D38C163D92	14.05.2014 0:00:00
13250	1569 Eagle Ct		Concord	9	94519	POINT (-122.14280750752 38.0309714630993)	CDE77D62-2161-4F87-A89C-BD17AE643354	30.04.2014 0:00:00
13372	8740 Vista Way		Concord	9	94519	POINT (-122.191610946739 38.0005770803116)	619257F3-AF54-4574-A008-13C28E5B9FB2	19.10.2013 0:00:00
13425	5139 The Trees Dr		Concord	9	94519	POINT (-122.034492175171 37.9118482306531)	F6189AAE-7881-4040-8F32-3C4A77BF8277	29.11.2013 0:00:00
13441	4176 Alexander Pl		Concord	9	94519	POINT (-122.106204928105 38.0081756760085)	AEC9191E-45E0-463A-9918-B7D049A62730	05.08.2013 0:00:00
13498	4101 Buckthorn Court		Concord	9	94519	POINT (-122.003870017869 37.9374776340777)	3719DA66-320A-43FF-83DE-02B970B0FAEF	16.12.2013 0:00:00
13524	2206 Clear View Circle		Concord	9	94519	POINT (-122.155008367325 38.0195735695539)	5E939F03-9B04-42CD-AA48-1268F41BA8F1	12.11.2011 0:00:00
13574	9715 San Francisco		Concord	9	94519	POINT (-122.057401488885 38.0385700587962)	02F84362-28FC-4952-8804-C0DD3039E732	16.06.2014 0:00:00
13771	7917 Precipice Drive		Concord	9	94519	POINT (-122.02079890947 37.9853798889178)	C89CDEBF-C3FF-4F01-8148-8D76BED96268	17.05.2014 0:00:00
13928	535 La Salle Street		Concord	9	94519	POINT (-122.2249841874 37.963759597)	F9301D47-D41A-47B1-BEFD-0DF3E49CE24	14.11.2011 0:00:00

Была создана сводная таблица

1 Table = SUMMARIZE('Person Address', 'Person Address'[StateProvinceID], "Result", SUM('Person Address'[StateProvinceID]))

StateProvinceID	Result
79	208244
58	64090
36	360
73	3358
9	41076
74	1036
6	108
72	1296
15	465
57	3249
63	1512
1	25
119	119
20	6160
77	69377
14	27356
35	630
30	240
23	115
40	280
17	289
24	528
37	518

Был создан график, который рассчитывает среднее значение поля AddressID по городу.

Average of AddressID by City

