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Homework 6

As an individual dataset contains various features and millions of records. After reading the commitment to protecting nursing home and residents, it's crucial thing to have track of vaccination background of residents and staff.

Therefore, I trimmed dataset and plan to load data only about vaccination details like either they're vaccinated or not, if vaccinated which vaccine they received and how many dose.

QU1: How loading data? Using SSIS or BCP

From all provided datasets, I selected latest dataset which contain details up to March 2022 because I want to analyze the vaccinated staff and residents and as we know vaccination is mostly increase after 2021 and until 2022 booster requirement is also become necessary.

Step1: Extract data

Extract vaccination data columns from the dataset and create whole new dataset.

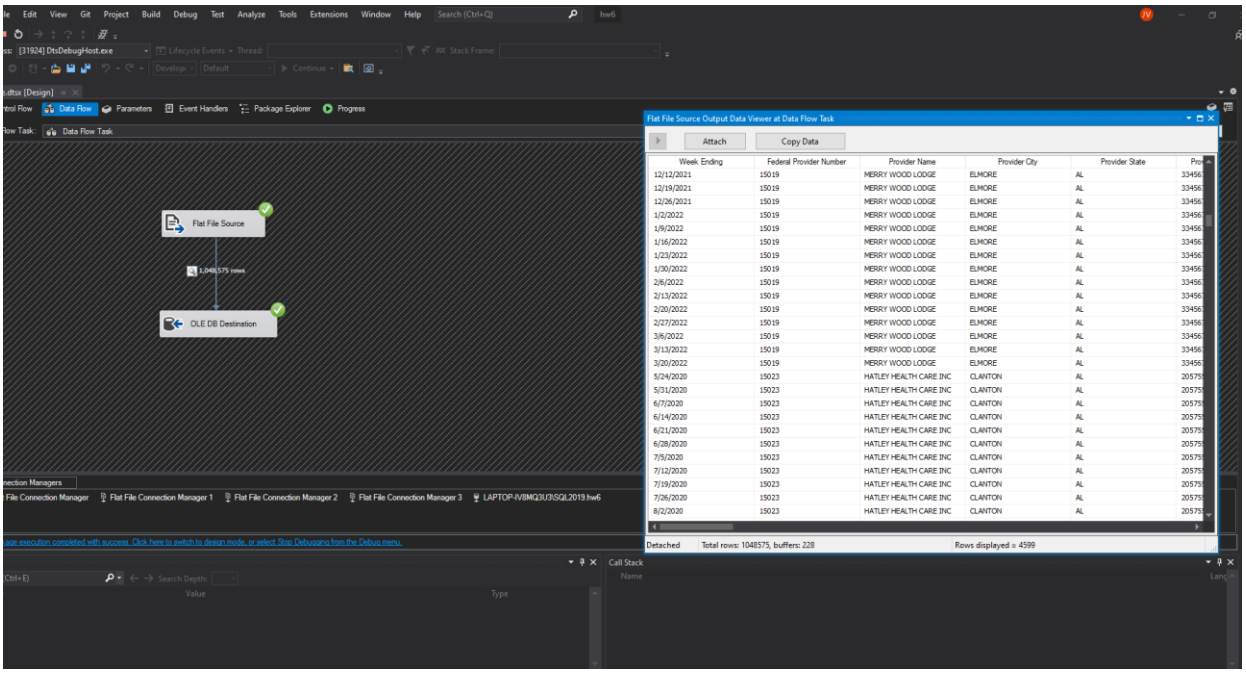
Step2: Filter data

Replace column values which contains delimiter comma(,) to space in the string. As it'll help further in SSIS process while mapping the columns.

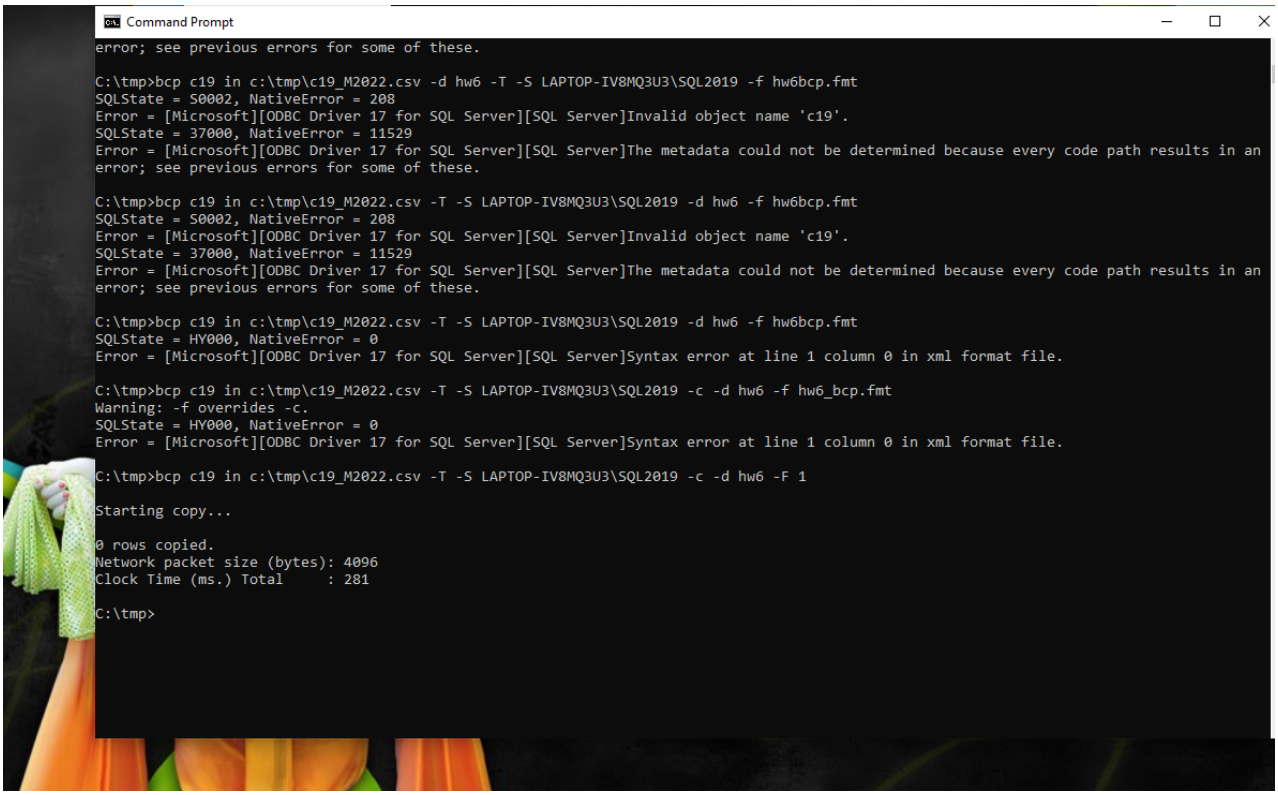
Step3: Loading data

After extracting and filtering data, load the data into SQL Server using SSIS and BCP process.

QU2: Load data into SQL using SSIS (10 Points)

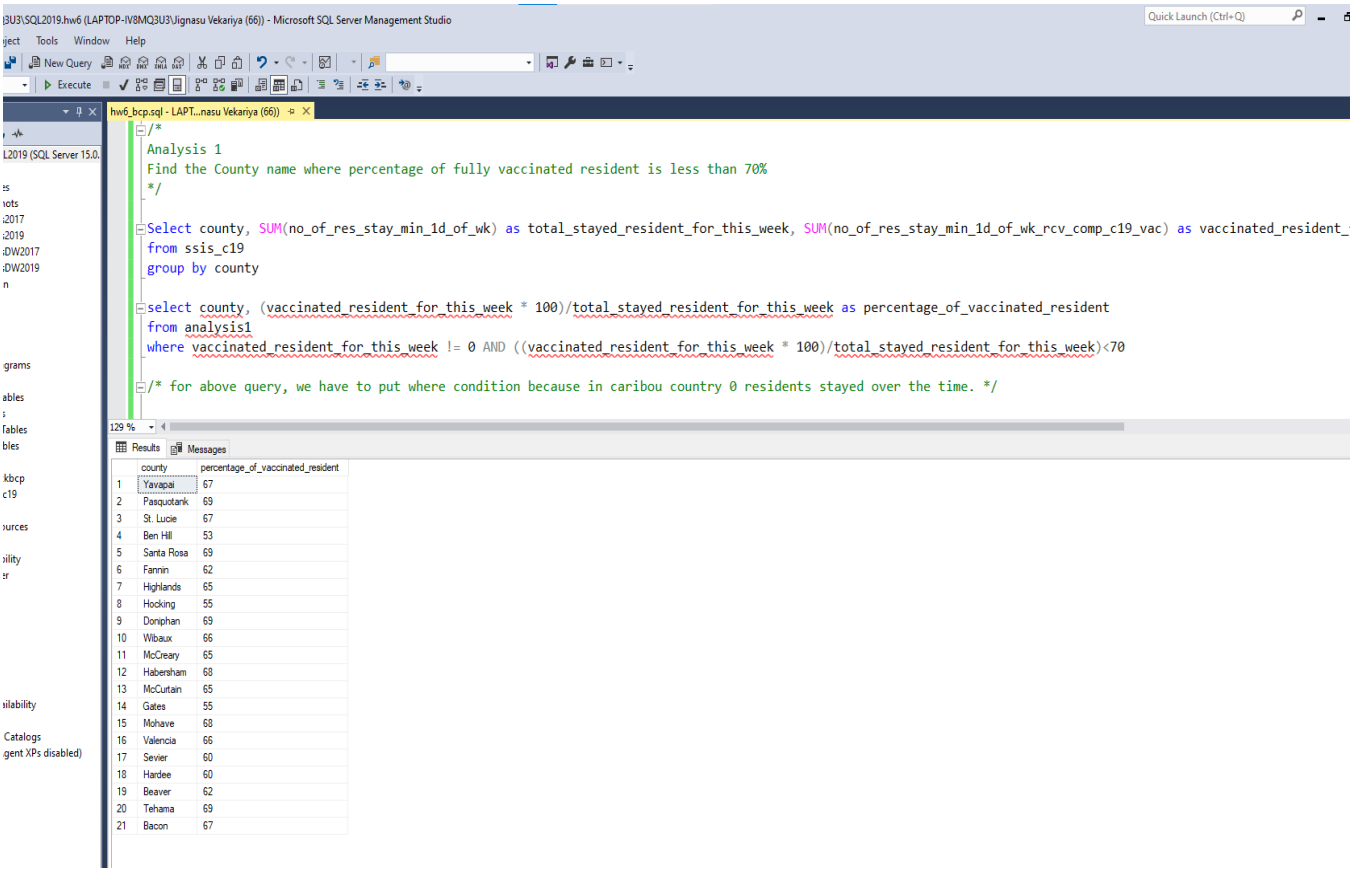


QU3: Load data using BCP (5 points)



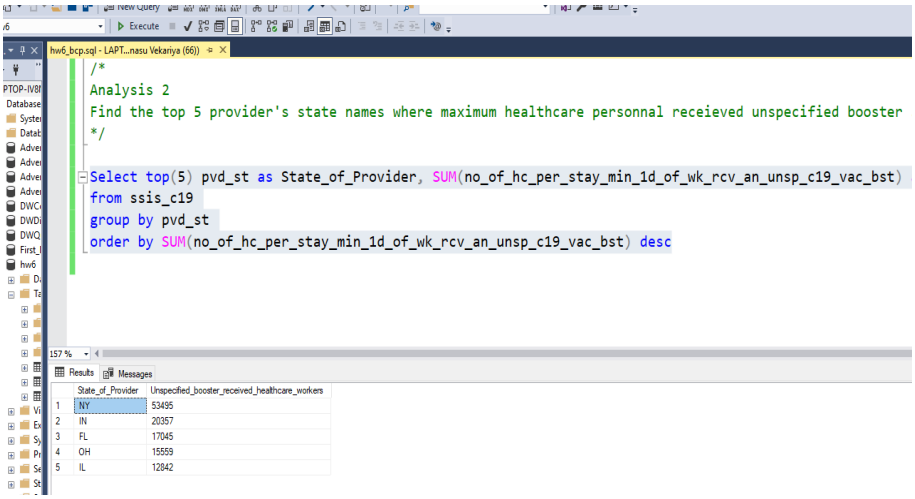
QU4: Analyze data (30 Points). Provide set of analysis (up to 1 page/2 table or graph)

Analysis:1



	county	percentage_of_vaccinated_resident
1	Yavapai	67
2	Pasquotank	69
3	St. Lucie	67
4	Ben Hill	53
5	Santa Rosa	69
6	Fannin	62
7	Highlands	65
8	Hocking	55
9	Doniphan	69
10	Wibaux	66
11	McCreary	65
12	Habersham	68
13	McCurtain	65
14	Gates	55
15	Mohave	68
16	Valencia	66
17	Sevier	60
18	Hardee	60
19	Beaver	62
20	Tehama	69
21	Bacon	67

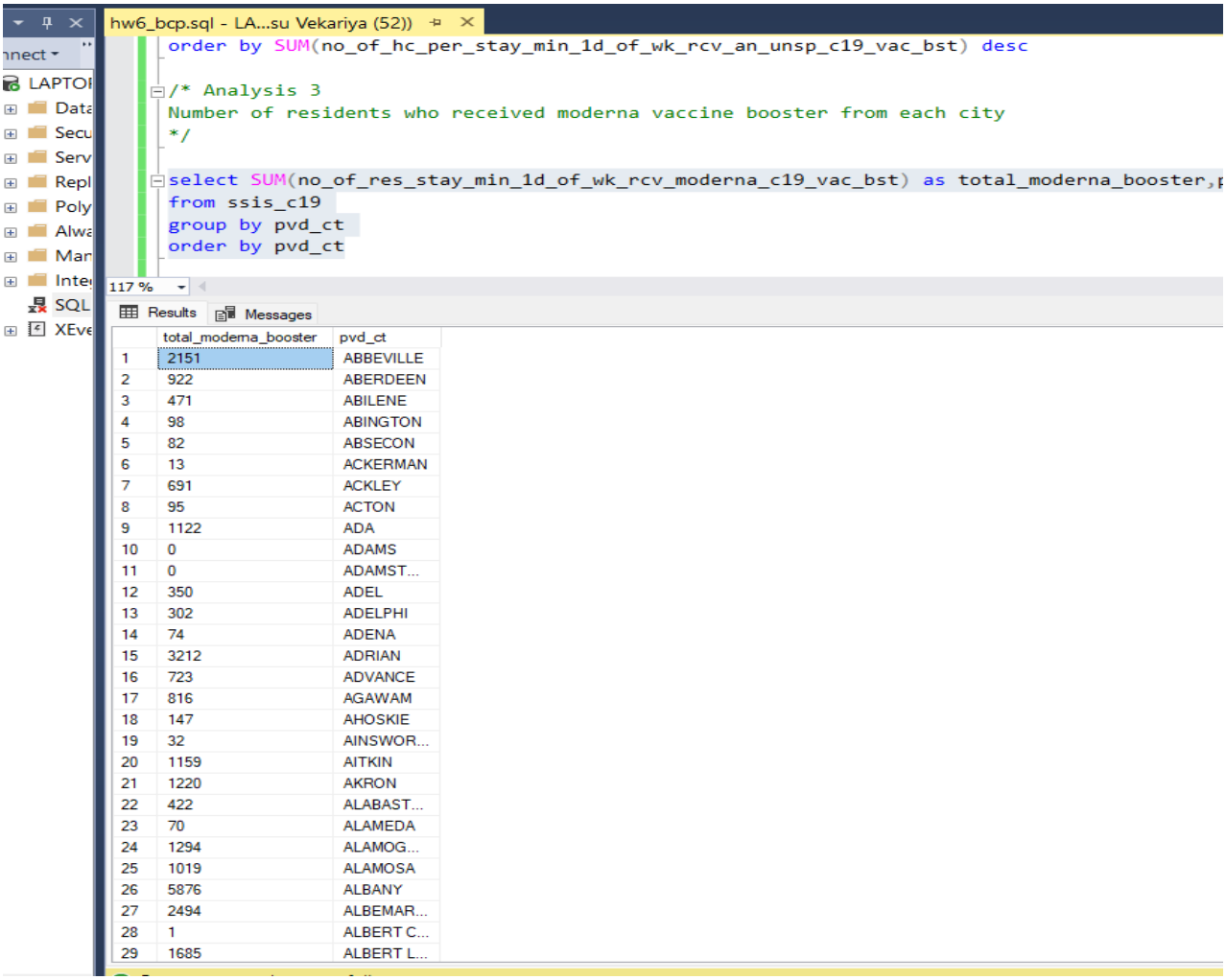
Analysis :2



```
/*
Analysis 2
Find the top 5 provider's state names where maximum healthcare personnal receieved unspecified booster
*/

Select top(5) pvd_st as State_of_Provider, SUM(no_of_hc_per_stay_min_1d_of_wk_rcv_an_unsp_c19_vac_bst)
from ssis_c19
group by pvd_st
order by SUM(no_of_hc_per_stay_min_1d_of_wk_rcv_an_unsp_c19_vac_bst) desc
```

	State_of_Provider	Unspecified_booster_received_healthcare_workers
1	NY	53495
2	IN	20357
3	FL	17045
4	OH	15559
5	IL	12842

Analysis :3



```
order by SUM(no_of_hc_per_stay_min_1d_of_wk_rcv_an_unsp_c19_vac_bst) desc

/* Analysis 3
Number of residents who received moderna vaccine booster from each city
*/

select SUM(no_of_res_stay_min_1d_of_wk_rcv_moderna_c19_vac_bst) as total_moderna_booster,p
from ssis_c19
group by pvd_ct
order by pvd_ct
```

	total_moderna_booster	pvd_ct
1	2151	ABBEVILLE
2	922	ABERDEEN
3	471	ABILENE
4	98	ABINGTON
5	82	ABSECON
6	13	ACKERMAN
7	691	ACKLEY
8	95	ACTON
9	1122	ADA
10	0	ADAMS
11	0	ADAMST...
12	350	ADEL
13	302	ADELPHI
14	74	ADENA
15	3212	ADRIAN
16	723	ADVANCE
17	816	AGAWAM
18	147	AHOSKIE
19	32	AINSWOR...
20	1159	AITKIN
21	1220	AKRON
22	422	ALABAST...
23	70	ALAMEDA
24	1294	ALAMOG...
25	1019	ALAMOSA
26	5876	ALBANY
27	2494	ALBEMAR...
28	1	ALBERT C...
29	1685	ALBERT L...

Analysis:4

```
/* Analysis 4
Retrive the total number of vaccinated residents and with unknown vaccination status
*/

select SUM(no_of_res_stay_min_1d_of_wk) as res_stay_minimum_1day,
(SUM(no_of_res_stay_min_1d_of_wk)-SUM(no_of_res_stay_min_1d_of_wk_with_an_ukwn_c19_vac_Status)) as vaccinated_resident,
SUM(no_of_res_stay_min_1d_of_wk_with_an_ukwn_c19_vac_Status) as Unknown_vaccination_status
from ssis_c19
```

117 %

Results | Messages

	res_stay_minimum_1day	vaccinated_resident	Unknown_vaccination_status
1	35854766	35311866	542900

Analysis:5

hw6 | Execute

hw6_bcp.sql - LA...su Vekariya (52))

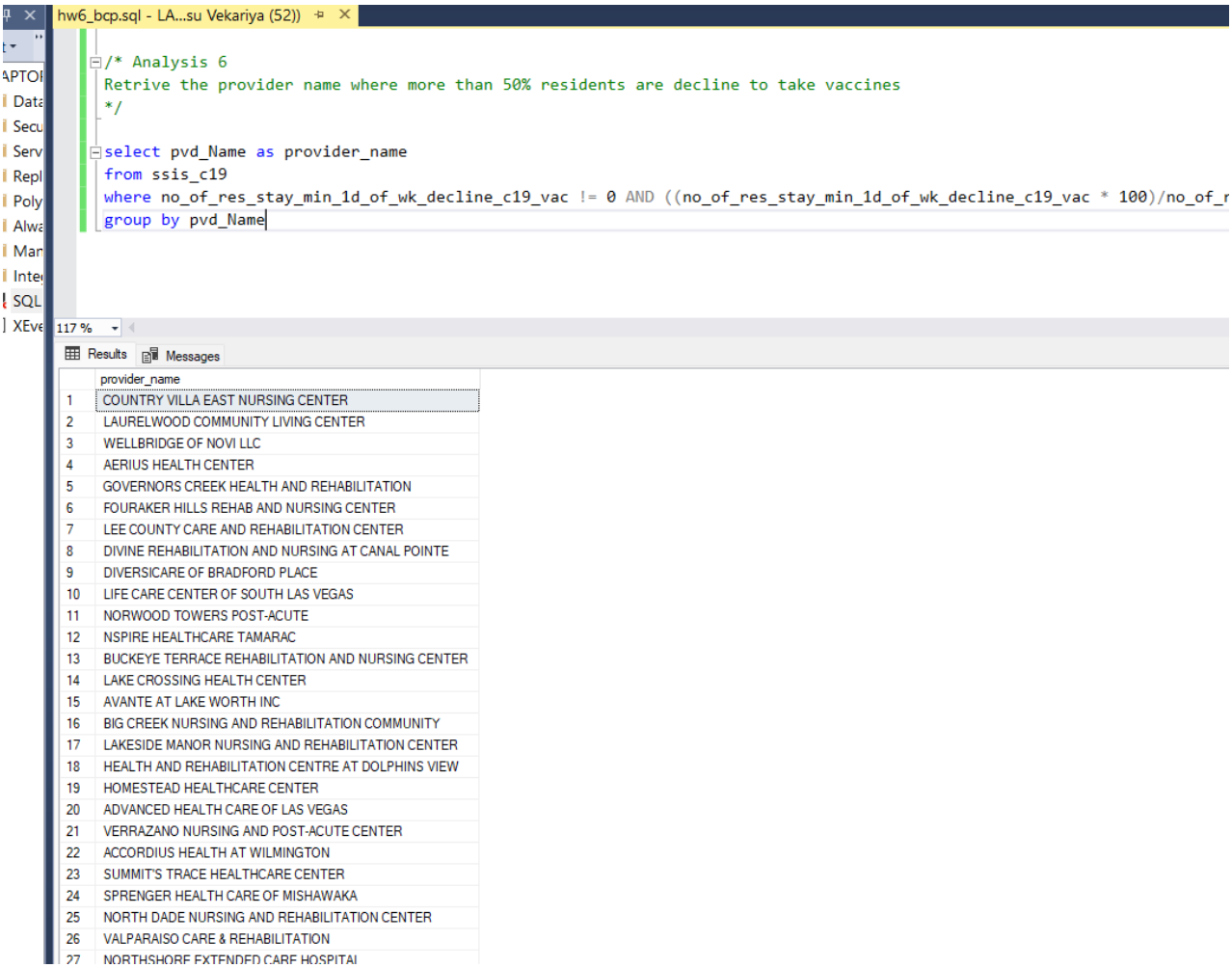
```
/* Analysis 5
retrive the number of health workers who are fully or partial vaccinated and/or having medicale contradiction or decline to take vaccine
*/

select SUM(no_of_hc_per_Eligible_to_Work__min_1d_of_wk_rcv_comp_c19_vac) as fully_vaccinated_healthcare_workers,
SUM(no_of_hc_per_Eligible_to_Work__min_1d_of_wk_rcv_Partial_c19_vac) as partial_vaccinated_healthcare_workers,
SUM(no_of_hc_per_Eligible_to_Work__min_1d_of_wk_with_med_contraindication_to_c19_vac) as healthcare_workers_have_medical_contradiction,
SUM(no_of_hc_per_Eligible_to_Work__min_1d_of_wk_decline_c19_vac) as healthcare_workers_who_decline_vaccination,
pvd_st as States
from ssis_c19
group by pvd_st
order by pvd_st
```

117 %

Results | Messages

	fully_vaccinated_healthcare_workers	partial_vaccinated_healthcare_workers	healthcare_workers_have_medical_contradiction	healthcare_workers_who_decline_vaccination	States
1	72064	1405	511	10913	AK
2	786153	48760	7849	236907	AL
3	665458	39229	9892	126521	AR
4	528421	19621	9019	112647	AZ
5	2903540	39651	27272	182747	CA
6	820619	16948	11153	82210	CO
7	1394883	25862	14320	70452	CT
8	131275	4714	324	4318	DC
9	224909	7250	1234	35633	DE
10	2683447	133703	28819	879042	FL
11	1029355	58539	8923	271871	GA
12	267645	2494	763	11332	HI
13	1116538	30986	13560	281678	IA
14	190666	7174	4773	64249	ID
15	2499541	78241	27806	475895	IL
16	1403702	66812	34549	511863	IN
17	796117	26938	10897	231553	KS
18	826896	48039	9918	290692	KY
19	729155	59715	6616	268173	LA
20	1916792	33766	11659	103588	MA
21	1167361	34570	8147	121411	MD
22	386777	5902	2349	32594	ME
23	1463438	72564	20741	497772	MI
24	1469382	34144	11929	304566	MN
25	1083285	61521	16431	445273	MO
26	556339	36629	6051	194501	MS
27	142924	3867	2091	50594	MT

Analysis:6



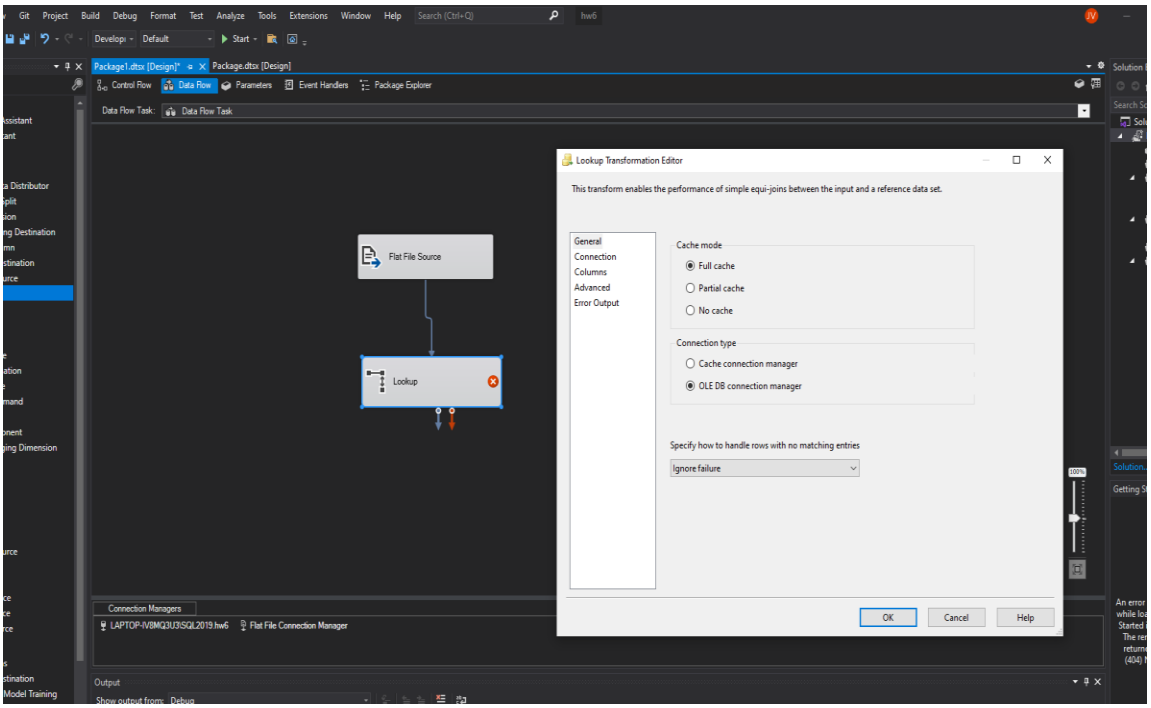
	provider_name
1	COUNTRY VILLA EAST NURSING CENTER
2	LAURELWOOD COMMUNITY LIVING CENTER
3	WELLBRIDGE OF NOVI LLC
4	AERIUS HEALTH CENTER
5	GOVERNORS CREEK HEALTH AND REHABILITATION
6	FOURAKER HILLS REHAB AND NURSING CENTER
7	LEE COUNTY CARE AND REHABILITATION CENTER
8	DIVINE REHABILITATION AND NURSING AT CANAL POINTE
9	DIVERSICARE OF BRADFORD PLACE
10	LIFE CARE CENTER OF SOUTH LAS VEGAS
11	NORWOOD TOWERS POST-ACUTE
12	NSPIRE HEALTHCARE TAMARAC
13	BUCKEYE TERRACE REHABILITATION AND NURSING CENTER
14	LAKE CROSSING HEALTH CENTER
15	AVANTE AT LAKE WORTH INC
16	BIG CREEK NURSING AND REHABILITATION COMMUNITY
17	LAKESIDE MANOR NURSING AND REHABILITATION CENTER
18	HEALTH AND REHABILITATION CENTRE AT DOLPHINS VIEW
19	HOMESTEAD HEALTHCARE CENTER
20	ADVANCED HEALTH CARE OF LAS VEGAS
21	VERRAZANO NURSING AND POST-ACUTE CENTER
22	ACCORDIUS HEALTH AT WILMINGTON
23	SUMMIT'S TRACE HEALTHCARE CENTER
24	SPRENGER HEALTH CARE OF MISHAWAKA
25	NORTH DADE NURSING AND REHABILITATION CENTER
26	VALPARAISO CARE & REHABILITATION
27	NORTHSHORE EXTENDED CARE HOSPITAL

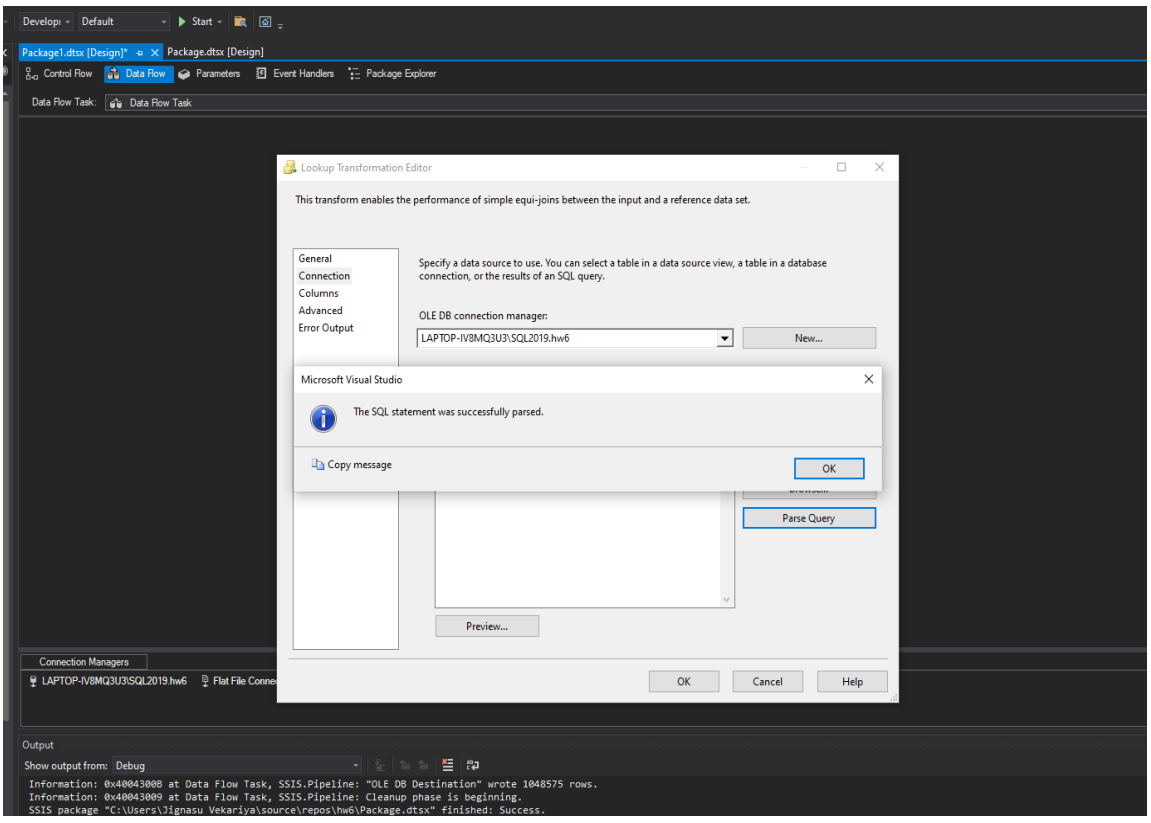
QU5: What's step to take if file provided again? What step for loading the data. (10 Points)

First, I try to load data using BCP which I was unable to perform because of some error.

Further for the new data, I'll update using incremental load in SSIS which compares source table and target table based on date or time.

QU6: Modify SSIS package to handle the next month data





As I loaded recent data in first SSIS, I just uploaded process of incremental load.

QU7: The file will also be in module 5

Create new file of test data show.. how created the input file (5 Points)