- 1). Make the original data in Flat Files Read Only (Preserve Original Data).
- 2). Create Folders/Files for validation and distributions of data.
- 3). Copy the all the data from the original CSV files to other CSV files (avoids contamination).
- 4). Check to see if the New Patient data files exist to validate the emails.
- 5). Validate the Emails while splitting them into a valid and invalid folder with files.
- 6). Integrate the validated Patient's information into the Patients (OLTP) database.
- 7). Merge today's date with time in the visits files for Bellevue, Kirkland, and Redmond CSV files new CSV files and a Newly Created OLAP Data Warehouse.
- 8). Import the Visits Data directly into the Patients Visits table with Clinic identified NULL's as 0. Handle all NULL values and convert datatypes as needed.
- 9). Finally, move the data from the Patients tables into the DWCorporateReports (OLAP) Database.

***Please see "VConnSettings" button on the website (Visits Connection Settings).

Problems encountered:

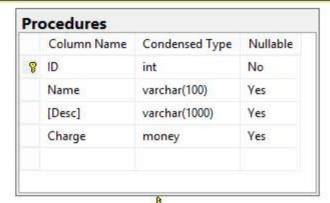
Client column missing on Bellevue CSV file though other CSV files had Client, converted Null's to 0 from using a derived column for distribution into the OLTP database. Email in CSV files needed validating, split files into Valid and In-Valid CSV files using C# Regex. Datatypes in OLTP database were set to money, converted them to decimal. Set up an OLAP Data Warehouse modeling structure with constraints based on the OLTP criteria and converted datatypes as needed.

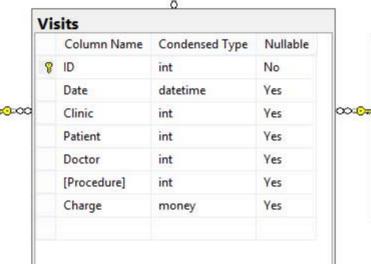


Created a calculated column in the OLAP database for hours worked and calculated the time values from the OLTP database.

Patients OLTP Database (Given)

	Column Name	Condensed Type	Nullable
8	ID	int	No
	FName	varchar(28)	Yes
	LName	varchar(19)	Yes



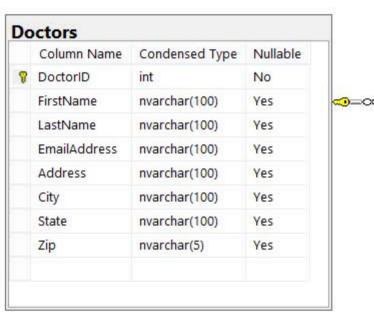


	Column Name	Condensed Type	Nullable
8	ID	int	No
	Name	varchar(50)	Yes
	Address	varchar(100)	Yes
	City	varchar(50)	Yes

	Column Name	Condensed Type	Nullable	
8	ID	int	No	
	FName	varchar(28)	Yes	
	LName	varchar(29)	Yes	
	Email	varchar(100)	Yes	
	Address	varchar(97)	Yes	
	City	varchar(72)	Yes	
	State	varchar(50)	Yes	
	ZipCode	int	Yes	

	1 E	☐select * from [dbo].[Clinics]												
	2	select * from [dbo].[Doctors]					Pa	atier	nts Databa	se Tak	oles			
	3		from [dbo].	_			(Dansala + a d)							
	4		from [dbo].	_		s]		(Populated)				
100 %	5	select *	from [dbo].	Vis	sits									
Ⅲ R	esults	Message	es											
	ID		Address		City	1								
1	100	Bellevue	123 Main Stree	et	Bellevue									
2	200	Kirkland	789 Lake Stree		Kirkland									
3	300		999 Availability		Redmon									
	ID	FName	LName											
1	1	Robert	Hodges											
2	2	Ben	Goldstein											
3	3	George	Abercrombie											
4	4	Kevin	Mitchell											
5	5	Rudolph	Ison											
6	6	Elizabeth	Bemdt	TAL	900 T.			A 1.1		~	C: 1	7.0.1		
222	ID	FName		LNan		mail	, ,,	Address		City	State	ZipCode		
232	232	John		Amla			/ayYou.com		y Mountain Ave.	Redmond	WA	98008		
233	233	Margaret		Miller			yYou.com		e Street	Bellevue	WA	98004		
234	234	Lawrence		Coop				538 Pla		Lynnwood	WA	98036		
235	235	A.		Liu				ssmont Center Drive	Lynnwood	WA	98036			
236	236	Michael			acobson MJacobson@MyCo.com		761 Ma		Lynnwood	WA	98036			
237	237	Marjorie	v - 20 r		Heaney@YayYou.com			aring Green	Lynnwood	WA	98036			
238	238	Janaina Bam	eiro Gambaro	Sues	ss JS	Suess@W	amMail.com	535 W	Washington Ave Ste D	Lynnwood	WA	98036		
	ID	Name			esc				Charge					
1	1	Brief interview	& evalua	lr	nterview ar	nd evaluat	ion, described	as brief	188.00					
2	2	Limited intervie		In	nterview ar	nd evaluat	ion, described	as limited	188.00					
3	3	Comprehen int	erview/eval	In	nterview ar	nd evaluat	ion, described	as com	188.00					
4	4	Interview & ev	aluat NEC	0	ther interv	iew and e	valuation		188.00					
5	5	Interview & ev	aluat NOS	D)iagnostic i	interview a	and evaluation.	not ot	188.00					
6	6	Limited consul	tation	C	onsultation	n, describe	ed as limited		288.00					
7	7	Comprehensiv	e consultattatio	n C	onsultation	n, <mark>descri</mark> be	ed as comprehe	ensive	288.00					
8	8	Consultation N	IEC	0	ther consu	ultation			288.00					
^	0	~ h	100		D. C.			~	200.00					
		Date		linic	Patient	Doctor	Procedure	Charge						
1	1	2005-01-01 09		200	507	NULL	14	568.00						
2	2	2005-01-01 09		300	130	NULL	1	188.00						
3	3	2005-01-01 13		200	162	2	31	342.00						
4	4	2005-01-01 14		200	909	2	33	388.00						
5	5	2005-01-01 10):45:00.000	300	310	13	11	438.00						
-	-	: - : :			2.12	-	V		1=					

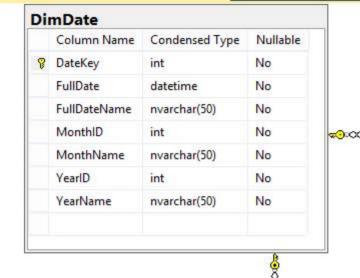
	Column Name	Condensed Type	Nullable
8	ShiftID	int	No
	ShiftStart	time(0)	Yes
	ShiftEnd	time(0)	Yes



	Column Name	Condensed Type	Nullable
8	DoctorsShiftID	int	No
	ShiftDate	datetime	Yes
	ClinicID	int	Yes
	ShiftID	int	Yes
	DoctorID	int	Yes

	Clini	ics	-	
00— <u>(10</u>	C	olumn Name	Condensed Type	Nullable
	8 C	linicID	int	No
	C	linicName	nvarchar(100)	Yes
	A	ddress	nvarchar(100)	Yes
	C	ity	nvarchar(100)	Yes
	S	tate	nvarchar(100)	Yes
	Z	ip	nvarchar(5)	Yes

SQLQ	ueryz.sqi -	ioo/cnns	tobuei (ככי) 🥕 🗸	1							
	1		om [dbo].[Clini								
	Part and		om [dbo].[Docto om [dbo].[Docto		1		DoctorsSched	lules I	Data	base	(OLTP)
			om [dbo].[bbctc								
100 %											
	Results 📑	Messages									
	ClinicID	ClinicName	Address	City	Stat	e Zip					
1	1	Bellevue	123 Main Street	Bellevu	e WA	98004					
2	2	Kirkland	789 Lake Street	Kirkland	AW E	98033					
3	3	Redmond	999 Availability Av	e Redmo	nd WA	98008					
	DoctorID	First Name	LastName	EmailAddre	:55		Address	City	State	Zìp	
1	1	Robert	Hodges	RHodges@	⊋WamMa	ail.com	268 Green Valley Crescent	Redmond	WA	98008	
2	2	Ben	Goldstein	BGoldstein			987 Mall	Redmond	WA	98008	
3	3	George	Abercrombie	GAbercrombie@WarmMail.com 8		804 W Las Positas Blvd	Lynnwood	WA	98036		
4	4	Kevin	Kevin Mitchell		GSale.co	m	908 W Las Positas Blvd	Lynnwood	WA	98036	
5	5	Rudolph Ison		RIson@Ya	yYou.com	1	881 99354 300 Union Street	Bellevue	WA	98004	
6	6	Elizabeth Berndt		EBemdt@	Wam Mail	.com	877 Box 8259024	Lynnwood	WA	98036	
7	7	Michael John Greer		MGreer@0	Sale.com	ı	136 East Main Avenue	Woodnville	WA	98072	
8	8	Johnny Kogan		JKogan@\	WarmMail.	com	983 Three Rivers Drive	Lynnwood	WA	98036	
9	9	9 Alan Frintu		AFrintu@N	lyCo.com		374 E St Andrews Pl	Lynnwood	WA	98036	
10	10	Kelly	Steiner	KSteiner@	MyCo.cor	n	221 E. Newlands Dr	Bellevue	WA	98004	
11	11	Mihail	Kîm	MKim@GS	ale.com		44 Kingsbridge Garden Cir	Lynnwood	WA	98036	
12	12	Laura	German	LGeman@	GSale.co	m	988 W. Lake Ave.	Bellevue	WA	98004	
13	13	Lee	Casts	LCasts@Y	ayYou.co	m	616 Beech Ind.	Bellevue	WA	98004	
	DoctorsSh	iftID Shift	Date	ClinicID	ShiftID	DoctorID					
1	1	2009	5-01-01 00:00:00.000	1	1	3					
2	2	2009	5-01-01 00:00:00.000	1	2	7					
3	3	2009	5-01-01 00:00:00.000	2	1	12					
4	4	2009	5-01-01 00:00:00.000	2	2	2					
5	5	2005	5-01-01 00:00:00.000	3	1	13					
6	6	2005	5-01-01 00:00:00.000	3	2	2					
7	7	2009	5-01-02 00:00:00.000	1	1	6					
8	8	2005	5-01-02 00:00:00.000	1	2	4					
9	9	2009	5-01-02 00:00:00.000	2	1	6					
10	10	2009	5-01-02 00:00:00.000	2	2	4					
11	11	2005	5-01-02 00:00:00.000	3	1	13					-
	ShiftID	Shift Start	ShiftEnd								
1	1	09:00:00	05:00:00								
2	2	01:00:00	21:00:00								
3	3	21:00:00	09:00:00								



	Column Name	Condensed Type	Nullable	
8	DoctorsShift	int	No	
	DoctorsShiftID	int	No	
	ShiftDateKey	int	No	
	ClinicKey	int	No	
	ShiftKey	int	No	
	DoctorKey	int	No	
	HoursWorked	decimal(18, 4)	Yes	

- 11	P	DoctorKey	int	No
		DoctorID	int	No
>○⊙₩		DoctorFullName	nvarchar(100)	No
		Doctor Email Address	nvarchar(50)	No
		DoctorAddress	nvarchar(50)	No
		DoctorCity	nvarchar(50)	No
		DoctorState	char(2)	No
		DoctorZip	char(10)	No

	Column Name	Condensed Type	Nullable
P	VisitKey	int	No
	DateKey	int	No
	ClinicKey	int	No
	PatientKey	int	No
	DoctorKey	int	No
	ProcedureKey	int	No
	Charge	decimal(18, 4)	No

	Di	mClinic			
		Column Name	Condensed Type	Nullable	
	8	ClinicKey	int	No	
		ClinicID	int	No	
		ClinicName	nvarchar(50)	No	
		ClinicAddress	nvarchar(50)	No	
∞		ClinicCity	nvarchar(50)	No	
3 T 2 T 2 T 2		ClinicState	char(2)	No	
		ClinicZip	char(10)	No	
00-					

	Column Name	Condensed Type	Nullable
8	ShiftKey	int	No
	ShiftID	int	No
	ShiftStart	time(0)	No
	ShiftEnd	time(0)	No

	Column Name	Condensed Type	Nullable
8	PatientKey	int	No
	PatientID	int	No
	PatientFullName	varchar(100)	No
	PatientEmail	varchar(50)	No
	PatientAddress	varchar(50)	No
	PatientCity	varchar(50)	No
	PatientState	char(2)	No
	PatientZipCode	char(10)	No

DimProcedure Column Name Condensed Type Nullable ProcedureKey int No ProcedureID int No ProcedureName varchar(100) No ProcedureDesc varchar(1000) No ProcedureCharge decimal(18, 4) No

DWCorporateReports Database (OLAP)