

# Caso práctico de SSIS orientado al análisis de datos

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Guatemala SQL Server User Group  
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# Agradecimiento

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- Carlos Robles – DBA Mastery & Guatemala SQL Server User Group
- Organizadores y Voluntarios - Denver SQL Server User Group
- Todd Kleinhans - SQL Accountability Group

# La Fuente de Datos – Su Origen

1	2	3	4	5
Person_ID_Student_Demogr	SEC_ACAD_LEVEL	First_Start_Date	Last_End_Date	First_Time_New_Cohort_Des
0190028	UG	1/11/2010	4/29/2012	NULL
0225780	UG	3/8/2010	7/4/2010	NULL
0241746	UG	8/24/2009	12/11/2016	NULL
6	7	8	9	10
STPR_ADMIT_STATUS	STPR_ACAD_PROGRAM	STPR_LATEST_START_DATE	STPR_CURRENT_END_DATE	Primary_Program
TR	SP.BS.RPAD	1/11/2010	6/15/2012	SP.BS.RPAD
CT	SH.CT.HIM	1/11/2010	5/6/2013	SH.CT.HIM
TR	SP.BS.RCIS	8/24/2009	11/1/2013	SP.BS.RCIS
11	12	13	14	15
Start_Date	End_Date	09SU	09FA	10SP
0040158	41094	1/0/1900	1/0/1900	12
0040220	43494.49969	1/0/1900	1/0/1900	3
0040024	42432	1/0/1900	1/6/1900	0
16	17	18	19	20
10SU	Status	SSN	PERSON_USER1	BIRTH_DATE
0000006	Fulltime	111-11-111	SP.MS.ROL:ERLP	21354
0000003	Parttime	111-11-111	SH.CT.HIM	25348
0000000	Parttime	111-11-111	CC.BS.CIS	27980
21	22	23		
Count_SS	Have Pell Grant	NEW/NOT NEW		
NULL	Y	NOT NEW		
NULL	N	NOT NEW		
NULL	N	NOT NEW		

# El Resultado Necesario

1	2	3	4	5
First Time(FT)/Non First Time	Full Time (FT)/Part Time (PT)	IPEDS Outcomes Groups	Original/Revised Cohort	UG Degree Awarded 1
NFT	FT	NFTFT	Revised Cohort	BS in Public Administration
NFT	PT	NFTPT	Revised Cohort	BS in Criminology
NFT	PT	NFTPT	Revised Cohort	BS.BA:Management
6	7	8	9	10
UG Degree Awarded 1 Date	UG Degree Awarded 2	UG Degree Awarded 2 Date	GR Degree Awarded	GR Degree Awarded Date
2012-06-15			Ms in Organization Leadershi	2014-04-04
2012-08-31	Certificate.Social Violence	2012-08-31		
2014-08-22			MS:RN to MS Nursing	2014-05-02
11	12	13	14	
DD Degree Awarded	DD Degree Awarded Date	Still Enrolled	Enrolled Elsewhere	
			HEALD COLLEGE - HAYWARD	
DPHAR in Pharmacy	2013-05-03			
			AMERICAN INTERCONTINENT	

# El Problema – Trabajo Manual en Excel

AutoSave Off SSIS-IPEDS-Outcomes-3-Analyst-file-from-SQL-Query.xlsx - 1 - Excel Table Tools Sign in

File Home Insert Page Layout Formulas Data Review View Add-ins Help Team Design Tell me Share Comments

Normal Page Break Preview Page Layout Custom Views Ruler Formula Bar Gridlines Headings Zoom 100% Zoom to Selection New Window Arrange All Freeze Panes Split Hide View Side by Side Synchronous Scrolling Reset Window Position Switch Windows Macros

E14 469192

	E	F	G	H	I	J	K
6	Person_ID_Student_Demographic	SEC_ACAD_LEVEL	First_Start_Date	Last_End_Date	First_Time_New_Cohort_Description	STPR_ADMIT_STATUS	STPR_ACAD_PROGRA
7	0190028	UG	1/11/2010	4/29/2012	NULL	TR	SP.BS.RPAD
8	0225780	UG	3/8/2010	7/4/2010	NULL	CT	SH.CT.HIM
9	0241746	UG	8/24/2009	12/11/2016	NULL	TR	SP.BS.RCIS
10	0263380	UG	3/8/2010	7/1/2012	NULL	TR	SP.BS.RCR
11	0335939	UG	10/19/2009	8/24/2014	NULL	FYT	SP.BS.RBA
12	0420606	UG	8/24/2009	12/18/2011	NULL	TR	SH.BSN.RRNM
13	0463887	UG	5/10/2010	7/17/2011	NULL	TR	SP.BS.RMK
14	0469192	UG	8/24/2009	5/1/2011	NULL	TR	SH.BSN.RRNM
15	0486187	UG	8/24/2009	5/2/2010	NULL	TR	SH.BS.RHIM
16	0540651	UG	3/8/2010	5/2/2010	NULL	TR	SP.BS.RCS
17	0616066	UG	8/24/2009	12/19/2010	NULL	TR	SH.BS.RHIM
18	0712658	UG	9/28/2009	4/27/2014	NULL	RS	SP.BS.RCIS
19	0729698	UG	8/24/2009	12/15/2013	NULL	TR	SP.BS.RCR

Outcomes Full List Outcomes Validate SS Revised Cohort Still Enrolled All Degrees Awarded 2009-2017 UG Degrees Awarded 2009-2017

GR Degrees Awarded 2009-2017 DD Degrees Awarded 2009-2017 Clearinghouse Returned Clearinghouse Returned New ...

Ready

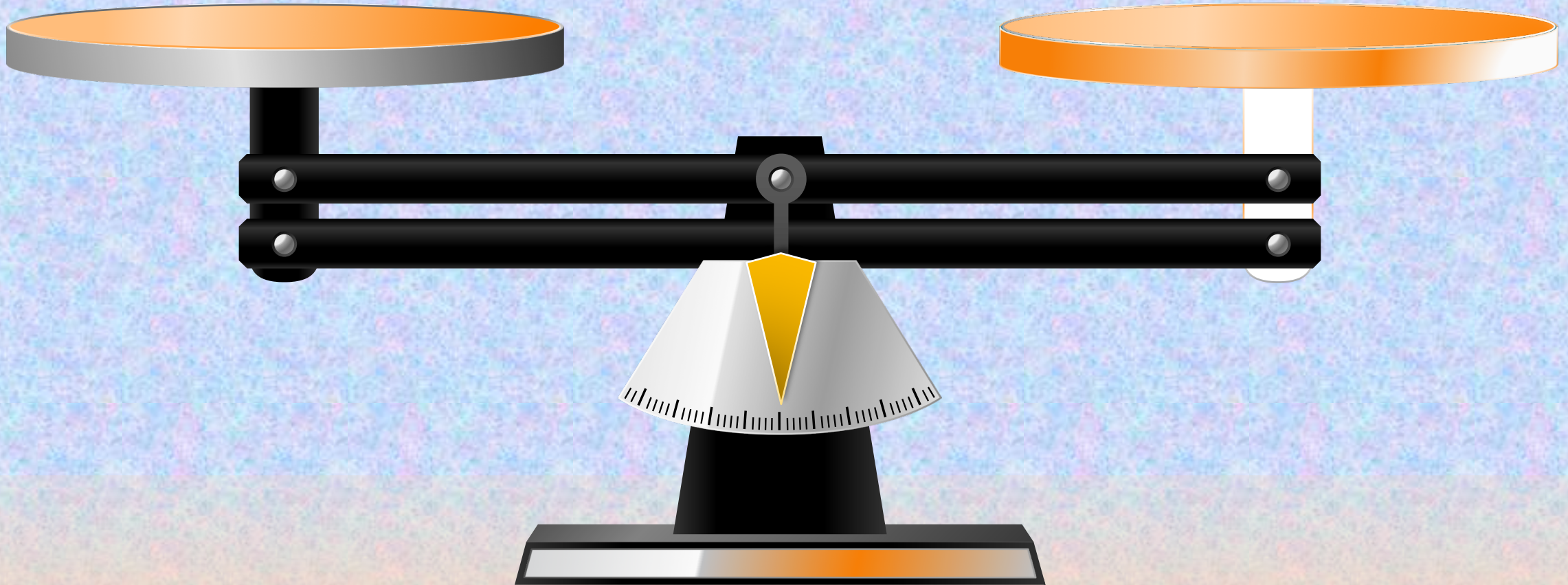


# El Desafío Técnico

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**Aprendizaje SSIS**

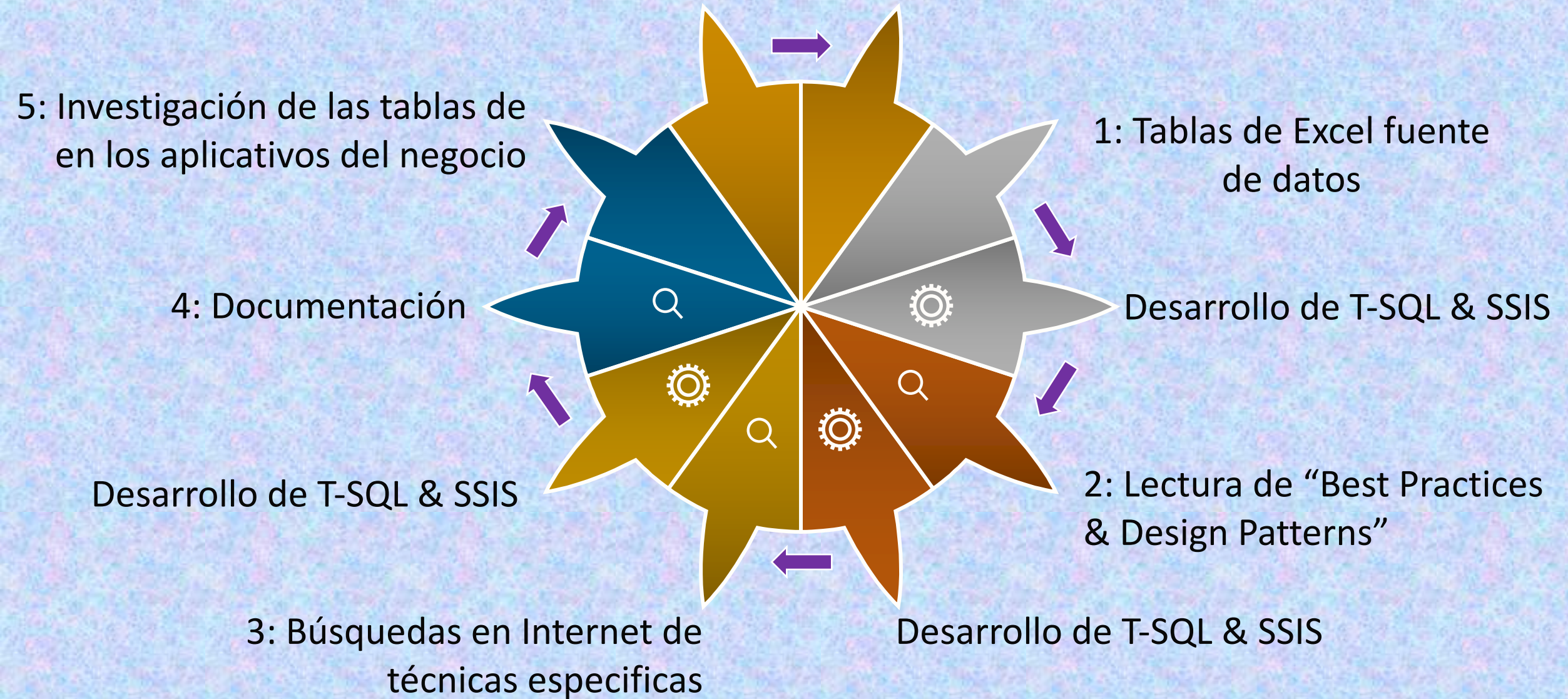
**Construcción de la Solución**



ITIL: Mejora Continua  
DevOps: Desarrollo ágil

Mantener el valor ofrecido entre el  
aprendizaje y el uso del producto

# ITIL - Mejora Continua + DevOps - Desarrollo ágil



# El Resultado Necesario

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# La Solución - Arquitectura

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Computadora Personal Dell Laptop G7 15

64-bit

24GB RAM

450 GB SSD (Sistema operativo y máquinas virtuales)

950 GB disco duro (almacenamiento)

Máquina Virtual VMware Workstation 15 Player

16GB asignado

Windows Server 2012

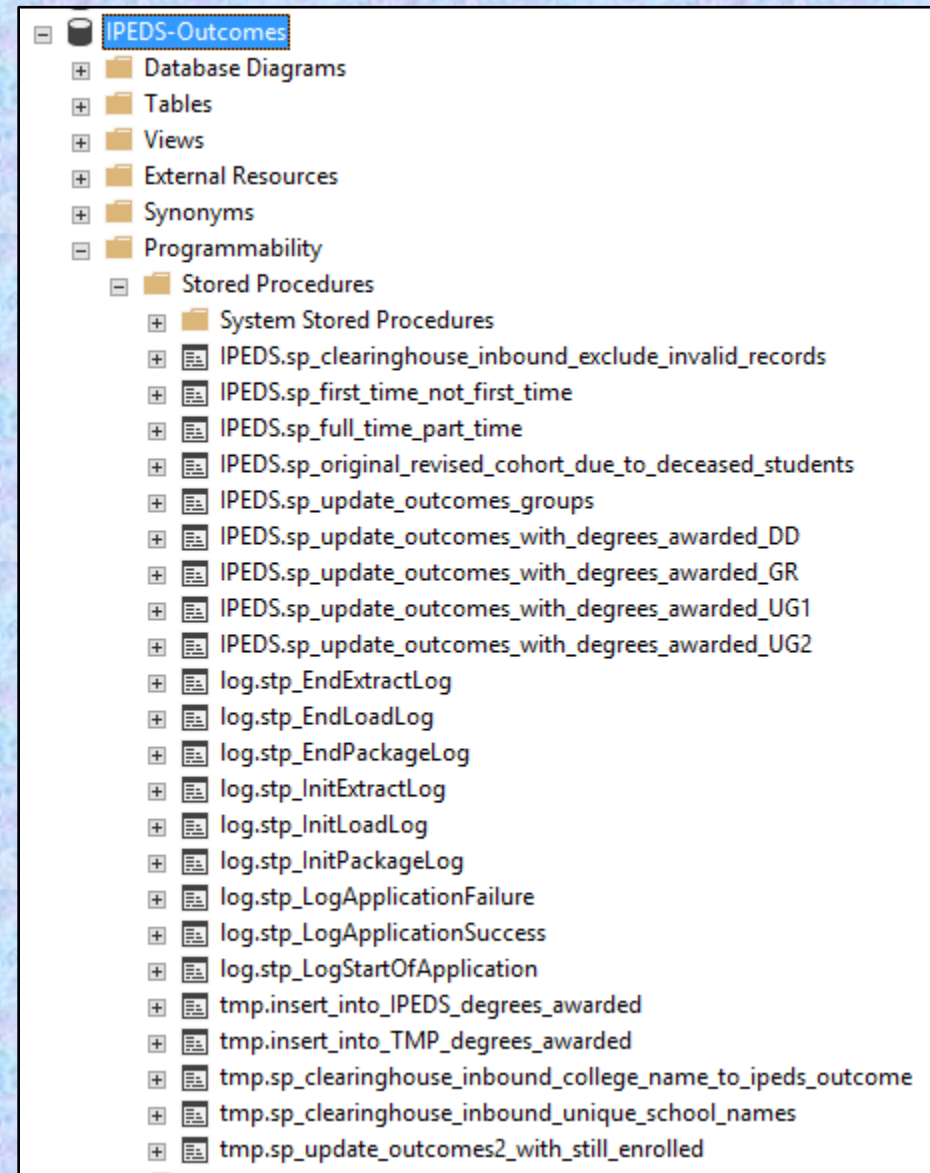
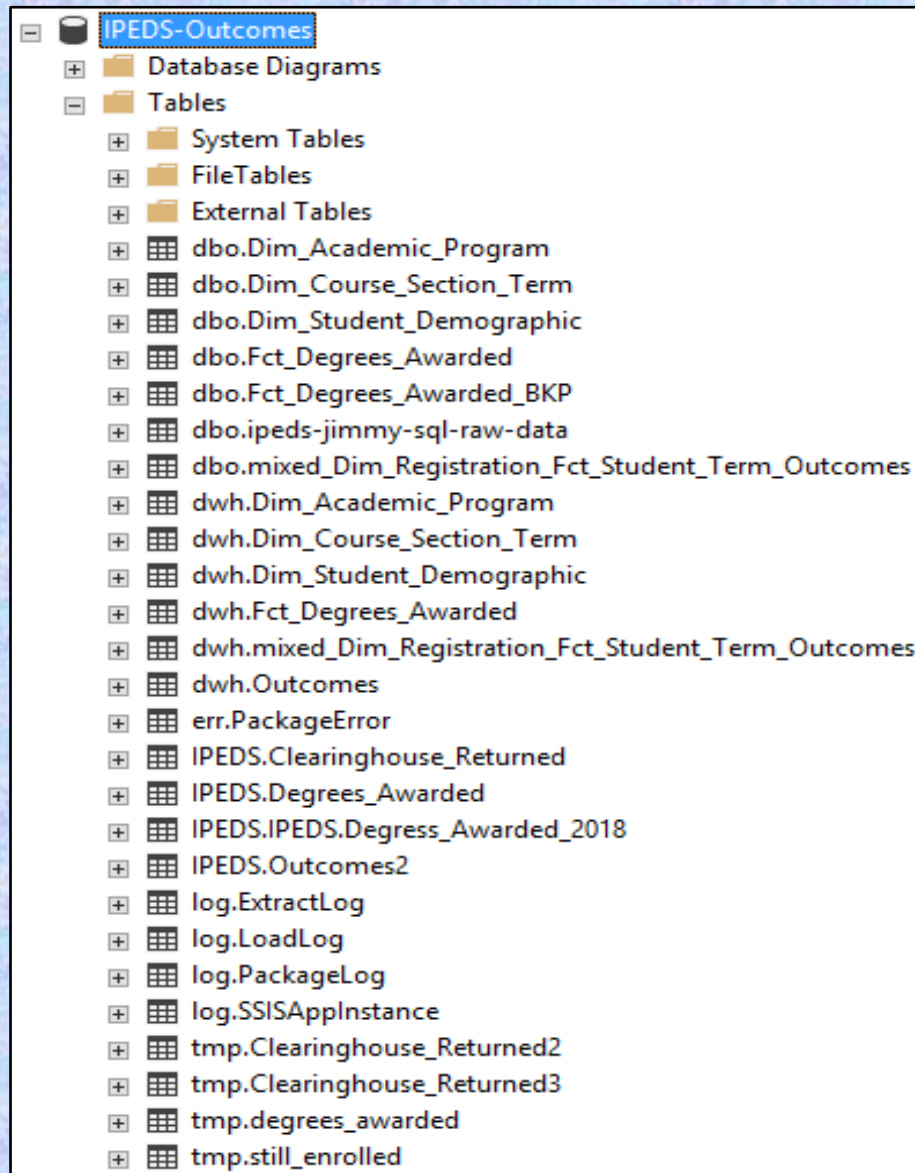
SQL Server 2014

SSIS

SSMS

Visual Studio 2015

# La Solución – Base de Datos





- Solution 'IPEDS\_Outcomes' (1 project)
  - IPEDS\_Outcomes (SQL Server 2016)
    - Project.params
    - Connection Managers
      - Flat File Connection Manager.conmgr
      - localhost.IPEDS-Outcomes.conmgr
      - localhost.IPEDS-Outcomes-ADO-NET.conmgr
    - SSIS Packages
      - cleansing\_source\_data.dtsx
      - clearinghouse-inbound.dtsx
      - clearinghouse-outbound.dtsx
      - degrees\_awarded.dtsx
      - dim\_course\_section\_term.dtsx
      - errors.dtsx
      - etl\_LOB\_jimmys\_to\_solution\_DWH.dtsx
      - etl-LOB-tables-to-solution-DWH.dtsx
      - etl-mixed\_Dim\_Registration\_Fct\_Student\_Term\_Outcomes.dtsx**
      - ParentPackage.dtsx
      - pre-process-Outcomes.dtsx
      - still-enrolled.dtsx
      - update\_outcomes\_with\_degrees\_awarded.dtsx
    - Package Parts
      - Control Flow
      - Miscellaneous

# Conclusiones y Comentarios Finales

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1. Encuentra lo que te motiva
  - ☐ Problema relacionado al trabajo
  - ☐ Seguimiento del progreso personal
2. Pequeños compromisos y consistencia van muy lejos
  - ☐ 15 minutos/día \* 365 días = 91.25 horas
  - ☐ 2 horas/semana \* 52 semanas = 104 horas
3. Comience creando un paquete plantilla
  - ☐ Seguimiento de errores personalizado
  - ☐ Registro y rastreo nativo de errores de SSIS
  - ☐ Registro de ejecución personalizado (demo)
4. Reunir y compartir sus conocimientos con la comunidad



# Reconocimiento

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- Andy Leonard, Tim Mitchell, Matt Masson, Jessica Moss, and Michelle Ufford
  - SQL Server Integration Services Design Patterns, 2<sup>nd</sup> Edition, apress
- Andy Leonard Stairway to SSIS: Twenty-One Levels
  - [www.sqlservercentral.com/stairways/stairway-to-integration-services](http://www.sqlservercentral.com/stairways/stairway-to-integration-services)
- Melissa Coates
  - [www.sqlchick.com/about-me](http://www.sqlchick.com/about-me)
- WiseOwlTutorials
  - [www.youtube.com/playlist?list=PLNI-AWhQzcmPg\\_uV2BZi\\_KRG4LKs6cRs](http://www.youtube.com/playlist?list=PLNI-AWhQzcmPg_uV2BZi_KRG4LKs6cRs)

## Próximos Pasos

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- ½ Llevar el código fuente a un repositorio de GitHub en la nube
- ✓ Compartir la solución con mi equipo en mi centro de trabajo
- Preparar una plantilla SSIS de seguimiento de errores personalizado

Gracias por la oportunidad!

Preguntas?