



# UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO FACULTAD DE INGENIERÍA

Semestre 2013-1

**Bases de Datos** 

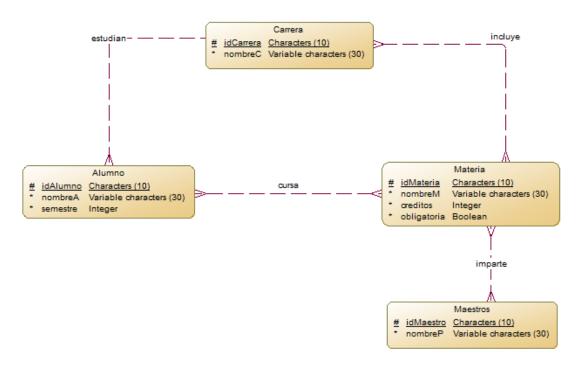
**Proyecto Final** 

**Equipo 1 Integrantes:** 

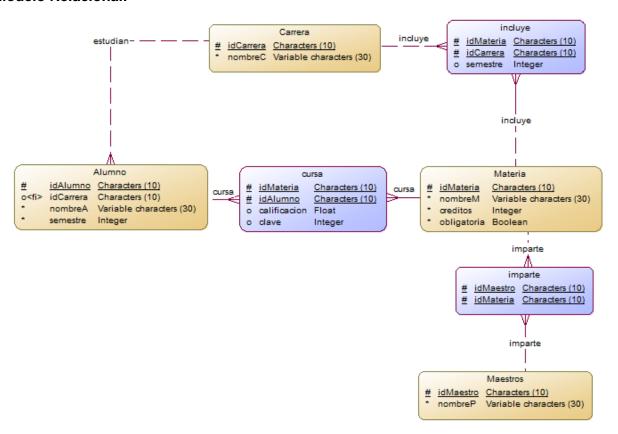
Guzmán Villanueva Julio César Marmolejo Servín Genaro

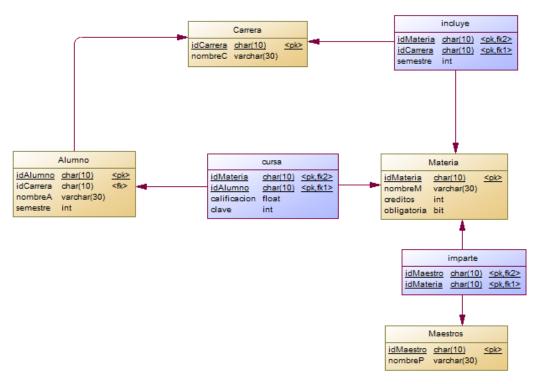
Fecha de entrega: 20/11/2012

### Diagrama Entidad - Relación

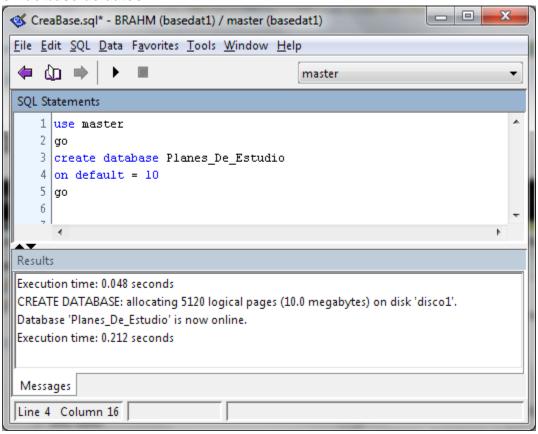


### **Modelo Relacional:**





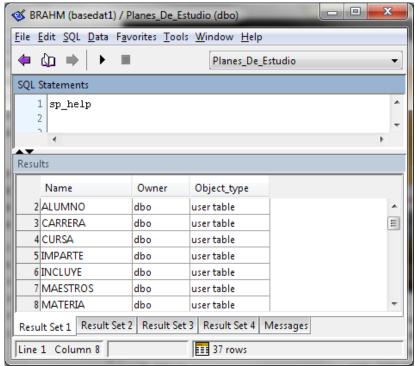
### Creación de base de datos:



### Creación de tablas

```
creaTablas.sql - BRAHM (basedat1) / Planes_De_Estudio (dbo)
<u>File Edit SQL Data Favorites Tools Window Help</u>
♠ \( \( \omega \) ⇒ \ \ \ ■
                                                                                                   Planes_De_Estudio
SQL Statements
  99 go
  100
 101 alter table IMPARTE
 102
         add constraint FK_IMPARTE_IMPARTE2_MATERIA foreign key (IDMATERIA)
 103
            references MATERIA (IDMATERIA)
 104
 105
 106 alter table INCLUYE
  107
         add constraint FK INCLUYE INCLUYE MATERIA foreign key (IDMATERIA)
 108
            references MATERIA (IDMATERIA)
  109 go
 110
  111
      alter table INCLUYE
         add constraint FK_INCLUYE_INCLUYE2_CARRERA foreign key (IDCARRERA)
 112
 113
            references CARRERA (IDCARRERA)
 114
 115
 116
Results
execution time: 0.059 second
Execution time: 0.043 seconds
Execution time: 0.045 seconds
Execution time: 0.043 seconds
Messages
Line 115 Column 1
```

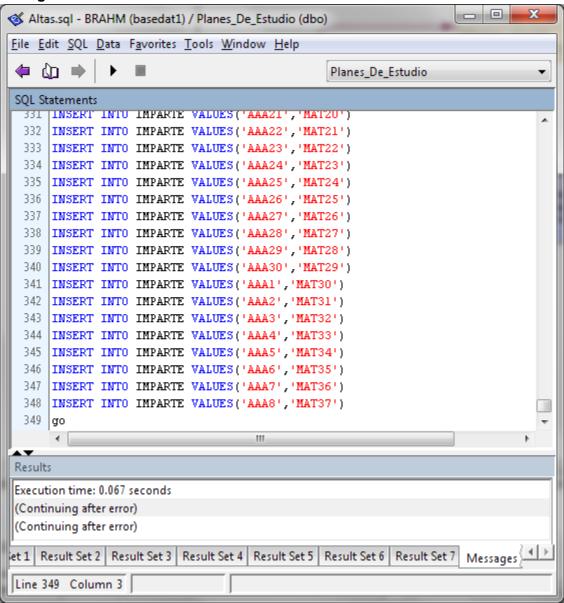
### Comprobación de la creación de las tablas:



### Creación de Check Constraints:

```
ж
CreaCHKConstraints.sql* - BRAHM (basedat1) / Planes_De_Estudio (dbo)
<u>File Edit SQL Data Favorites Tools Window Help</u>
 4 (1) =>
               I
                                                                     Planes De Estudio
SQL Statements
         add constraint NOMBRE_CARRERA check(NOMBREC in('Administración','Contaduría',
   10
                                                            'Computación', 'Derecho',
  11
                                                            'Economía', 'Actuaría',
   12
                                                            'Matemáticas Aplicadas', 'Estadística'))
  13 go
  14
  15 alter table INCLUYE
      add constraint SEMESTRE INCLUYE check(SEMESTRE in(1,2,3,4,5,6,7,8))
  18
  19 alter table CURSA
  20 add constraint CALIFICACION_CURSA check(CALIFICACION between 0 AND 10)
  21 go
  22
   23 alter table CURSA
        add constraint CLAVE_CURSA check(CLAVE in(1,2,3,4))
   25 go
                                                    111
Results
execution time: 0.034 seconds
Execution time: 0.092 seconds
                                                                                                     Ξ
Execution time: 0.05 seconds
Execution time: 0.039 seconds
Execution time: 0.049 seconds
 Messages
Line 25 Column 3
```

### Alta de registros a la BD:



### Registros añadidos:

# **CARRERA**

<b>IDCARRERA</b>	NOMBREC	
ADM	Administración	
CON	Contaduría	
сом	Computación	
DER	Derecho	
ECO	Economía	
ACT	Actuaría	
MAT	Matemáticas Aplicadas	
EST	Estadística	

### **MATERIA**

IDMATERIA	NOMBREM	CREDITOS	OBLIGATORIA
MAT0	Algebra	9	1
MAT1	Calculo Diferencial	10	1
MAT2	Geometria Analitica	11	1
мат3	Administracion	12	1
MAT4	Derecho laboral	9	1
MAT5	Costos	9	1
MAT6	Direccion	10	1
MAT7	Planeacion y control	11	0
MAT8	Conceptos Juridicos	12	1
мат9	Matematicas Financieras	9	1
MAT10	Contabilidad I	9	0
MAT11	Cultura y Comunicación	10	0
MAT12	Algebra Lineal	11	1
MAT13	Calculo Integral	12	1
MAT14	Estatica	9	1
MAT15	Computación para ingenieros	9	1
MAT16	Etica Profesional	10	0
MAT17	Macroeconomia	11	1
MAT18	Sociologia	12	1
MAT19	Derecho Romano	9	1
MAT20	Derecho civil	9	1
MAT21	Teoria del estado	10	0
MAT22	Historia Economica	11	1
MAT23	Economia Politica	12	1
MAT24	Teoria economica	9	1
MAT25	Economia industrial	9	1
MAT26	Economia Agricola	10	0
MAT27	Analisis matematico	11	1
MAT28	Finanzas	12	1
MAT29	Demografia	9	1
MAT30	Pensiones privadas	9	0
MAT31	Variable Compleja	10	1
MAT32	Calidad total	11	1
MAT33	Pronosticos	12	1
MAT34	Sistemas inteligantes	9	0
MAT35	Distribuciones	9	1
MAT36	Modelos	10	1
MAT37	Estadistica aplicada	11	0

### **MAESTROS**

IDMAESTRO	NOMBREP	
AAA1	CHAVEZ NORMA	
AAA2	BAUTISTA MARGARITA	
AAA3	FONSECA OMAR	
AAA4	TORRES LUIS	
AAA5	PEREZ PABLO	
AAA6	MORALES NAVA	
AAA7	CASTAÑEDA ERIC	
AAA8	MORALES GUADALUPA	
AAA9	REYES CINTIA	
AAA10	GUZMAN MARTIN	
AAA11	VILLANUEVA MARTHA	
AAA12	CABALLERO RIVAS	
AAA13	REYES CORTEZ	
AAA14	MENA ALEJANDRO	
AAA15	LOPEZ MARCOS	
AAA16	FATIMA MOUMTADI	
AAA17	SOLORZANO JUAN	
AAA18	CUARON ALFONSO	
AAA19	RINCON PEDRO	
AAA20	ARZAMENDI SERGIO	
AAA21	DOMIGUEZ SUSANA	
AAA22	TREJO DANIEL	
AAA23	VAZQUEZ ANA	
AAA24	CEJUDO ARTURO	
AAA25	LICEA VICTOR	
AAA26	ARREDONDO ARTURO	
AAA27	JOYNER JUAN	
AAA28	SANDOVAL LAURA	
AAA29	CEJUDO ALBERTO	
AAA30	MERRIFIELD CLAUDIO	

### **CURSA**

MATERIA	IDALUMNO	CALIFICACION	CLAVI
MATO MATO	410000000 410000001	8 9	NULL
MATO	410000001	8	NULL
мато	410000003	8	NULL
MATO MATO	410000004 410000005	9	NULL
MAT0	410000006	8	NULL
MATO	410000007	9	NULL
MATO MATO	410000008 410000009	8	NULL
MAT0	410000010	9	NULL
MATO	410000011	8	NULL
MATO MATO	410000012 410000013	8	NULL
MATO	410000014	8	NULL
MAT0	410000015	8	NULL
MATO MATO	410000016 410000017	9	NULL
MATO	410000018	8	NULL
MATO MATO	410000019 410000020	9	NULL
MATO	410000021	9	NULL
мато	410000022	8	NULL
MATO MATO	410000023 410000024	8	NULL
MAT0	410000024	8	NULL
MAT0	410000026	9	NULL
MATO MATO	410000027 410000028	8	NULL
MATO	410000028	9	NULL
MAT0	410000030	8	NULL
MATO MATO	410000031 410000032	9	NULL
MATO	410000032	8	NULL
мато	410000034	9	NULL
MATO MATO	41000035 41000036	8	NULL
MAT1	410000000	6	NULL
MAT1	410000001	7	NULL
MAT1	410000002 410000003	8	NULL
MAT1	41000004	9	NULL
MAT1	410000005 410000006	6 7	NULL
MAT1	410000006 410000007	8	NULL
MAT1	410000008	10	NULL
MAT1 MAT1	410000009 410000010	9	NULL
MAT1	410000010	7	NULL
MAT1	410000012	8	NULL
MAT1	410000013 410000014	10	NULL
MAT1	410000014	6	NULL
MAT1	410000016	7	NULL
MAT1 MAT1	410000017 410000018	8 10	NULL
MAT1	410000019	9	NULL
MAT1	410000020	6	NULL
MAT1	410000021 410000022	7 8	NULL
MAT1	410000022	10	NULL
MAT1	410000024	9	NULL
MAT1	410000025 410000026	6	NULL
MAT1	410000027	8	NULL
MAT1	410000028 410000029	10	NULL
MAT1	410000029 410000030	6	NULL
MAT1	410000031	7	NULL
MAT1 MAT1	410000032 410000033	8 10	NULL
MAT1	410000034	9	NULL
MAT1	410000035	6	NULL
MAT1 MAT2	410000036 410000000	5	NULL
MAT2	410000001	6	NULL
MAT2	410000002	10	NULL
MAT2 MAT2	410000003 410000004	10	NULL
MAT2	41000004	10	NULL
MAT2	410000006	10	NULL
MAT2 MAT2	410000007 410000008	6	NULL
MAT2	410000009	10	NULL
MAT2	410000010 410000011	6	NULL
MAT2 MAT2	410000011 410000012	10	NULL
MAT2	410000013	6	NULL
MAT2 MAT2	410000014	10	NULL
MAT2 MAT2	410000015 410000016	10	NULL
MAT2	410000017	10	NULL
MAT2	410000018	10	NULL
MAT2 MAT2	410000019 410000020	6	NULL
MAT2	410000021	10	NULL
MAT2 MAT2	410000022 410000023	6	NULL
MAT2	410000023	10	NULL
MAT2	410000025	6	NULL
MAT2 MAT2	410000026 410000027	10	NULL
MAT2	410000027	6	NULL
MAT2	410000029	10	NULL
MAT2 MAT2	410000030 410000031	10	NULL
MAT2	410000031	10	NULL
MAT2	410000033	10	NULL
MAT2 MAT2	410000034 410000035	6	NULL
MAT2	410000036	10	NULL
MAT12	410000010	10	1 2
MAT13 MAT29	410000010 410000010	10	3
MAT11	410000010	10	4
MAT12 MAT13	410000020 410000020	10	1 2
MAT13 MAT29	410000020	10	3
MAT11	410000020	10	4

### **INCLUYE**

IDMATERIA	IDCARRERA	SEMESTRE
MAT0	ADM	1
MAT1	ADM	1
MAT2	ADM	2
MAT0	CON	1
MAT1	CON	1
MAT2	CON	2
MAT0	COM	1
MAT1	COM	1
MAT2	COM	2
MAT0	DER	1
MAT1	DER	1
MAT2	DER	2
MATO	ECO	1
MAT1	ECO	1
MAT2	ECO	2
MAT0	ACT	1
MAT1	ACT	1
MAT2	ACT	2
MAT0	MAT	1
MAT1	MAT	1
MAT2	MAT	2
MATO	EST	1
MAT1	EST	1
MAT2	EST	2
MAT3	ADM	3
MAT4	ADM	3
MAT5	ADM	3
MAT6	ADM	3
MAT7	ADM	3
MAT8	CON	3
MAT9	CON	3
MAT10	CON	3
MAT11	COM	3
MAT12	COM	3
MAT13	COM	3
MAT14		
	COM	3
MAT15	COM	3
MAT16	COM	3
MAT17	DER	3
MAT18	DER	3
MAT19	DER	3
MAT20	DER	8
MAT21	DER	3
MAT22	ECO	3
MAT23	ECO	3
MAT24	ECO	3
MAT25	ECO	3
MAT26	ECO	3
MAT27	ACT	3
MAT28	ACT	3
MAT29	ACT	3
MAT30	ACT	3
MAT31	MAT	3
MAT32	MAT	3
MAT33	MAT	3
MAT34	MAT	3
MAT35	EST	3
MAT36	EST	3
IVIATOO		

## **IMPARTE**

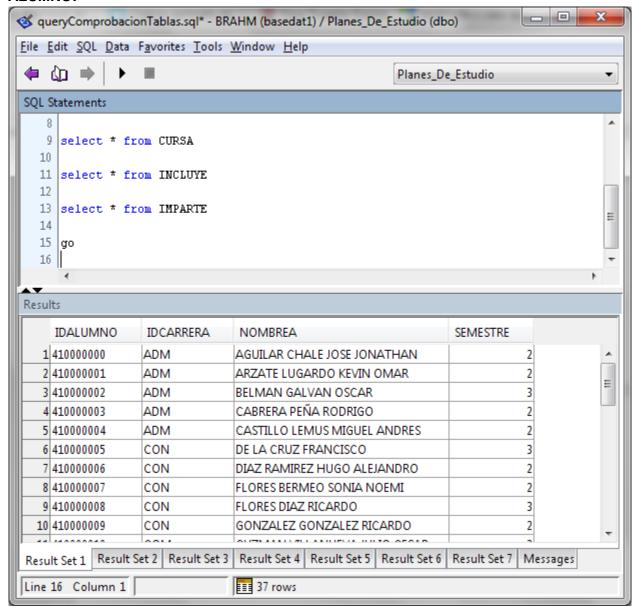
IDMAESTRO	IDMATERIA
AAA1	MAT0
AAA2	MAT1
AAA3	MAT2
AAA4	MAT3
AAA5	MAT4
AAA6	MAT5
AAA7	MAT6
AAA8	MAT7
AAA9	MAT8
AAA10	MAT9
AAA11	MAT10
AAA12	MAT11
AAA13	MAT12
AAA14	MAT13
AAA15	MAT14
AAA16	MAT15
AAA17	MAT16
AAA18	MAT17
AAA19	MAT18
AAA20	MAT19
AAA21	MAT20
AAA22	MAT21
AAA23	MAT22
AAA24	MAT23
AAA25	MAT24
AAA26	MAT25
AAA27	MAT26
AAA28	MAT27
AAA29	MAT28
AAA30	MAT29
AAA1	MAT30
AAA2	MAT31
AAA3	MAT32
AAA4	MAT33
AAA5	MAT34
AAA6	MAT35
AAA7	MAT36
AAA8	MAT37

### **ALUMNOS**

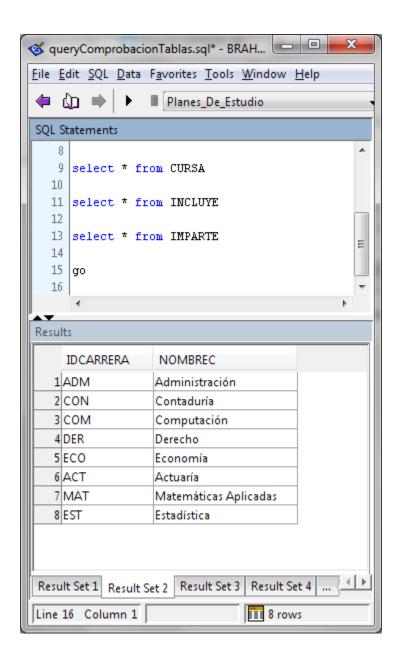
DALUMNO	IDCARRERA	NOMBREA	SEMESTRE
410000000	ADM	AGUILAR CHALE JOSE JONATHAN	2
410000001	ADM	ARZATE LUGARDO KEVIN OMAR	2
410000002	ADM	BELMAN GALVAN OSCAR	3
410000003	ADM	CABRERA PEÑA RODRIGO	2
410000004	ADM	CASTILLO LEMUS MIGUEL ANDRES	2
41000005	CON	DE LA CRUZ FRANCISCO	3
410000006	CON	DIAZ RAMIREZ HUGO ALEJANDRO	2
410000007	CON	FLORES BERMEO SONIA NOEMI	2
410000008	CON	FLORES DIAZ RICARDO	3
410000009	CON	GONZALEZ GONZALEZ RICARDO	2
410000010	COM	GUZMAN VILLANUEVA JULIO CESAR	3
410000011	COM	HERNANDEZ VALENCIA RICARDO	3
410000012	COM	HERRERA LEDON JOSE	2
410000013	DER	LEYVA GARCIA CID SANDRO	2
410000014	DER	LOPEZ MANCILLA SARA	3
410000015	DER	MARTINEZ CANTERA JOSE	2
410000016	DER	MARTINEZ SALDIVAR MIRIAM	2
410000017	DER	MARTINEZ VAZQUEZ FRANCISCO	3
410000018	ECO	MAURILIO DIEGO	2
410000019	ECO	MENDOZA BAUTISTA ESTHER	2
410000020	СОМ	MARMOLEJO SERVIN GENARO	3
410000021	ECO	MORALES GUZMAN ANA LAURA	2
410000022	ECO	MORALES MANZANERO MARIANA MABEL	2
410000023	ACT	OLVERA CAMBRON LUIS ANGEL	3
410000024	ACT	PLIEGO VILLANUEVA ANDREA	2
410000025	ACT	REYES VELAZQUEZ CHRISTIAN	2
410000026	ACT	RIOS SOLTERO JORGE OCTAVIO	3
410000027	MAT	ROBLEDO CARRANZA ESAI	2
410000028	MAT	ROBLES MUÑOZ FERNANDO	2
410000029	MAT	RODRIGUEZ CHAVEZ DANIEL	3
410000030	MAT	ROMERO VELAZQUEZ DIANA	2
410000031	MAT	SANCHEZ BENAVIDES EDUARDO	2
410000032	EST	TAPIA MIRANDA ARIADNA	3
410000033	EST	YEPEZ AGUILAR RICARDO	2
410000034	EST	MARTINEZ SANCHEZ JOSE	2
410000035	EST	CALIX OSCAR JAVIER	3
410000036	EST	SANCHEZ GRANDE	2

### Comprobación de Inserción:

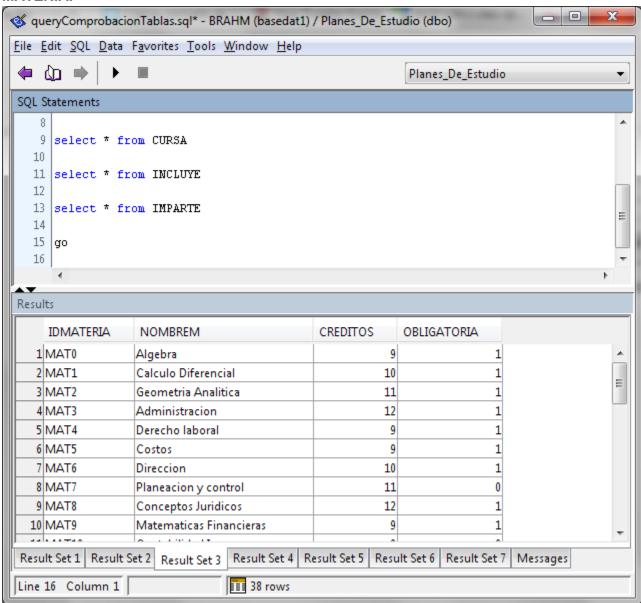
### **ALUMNO:**



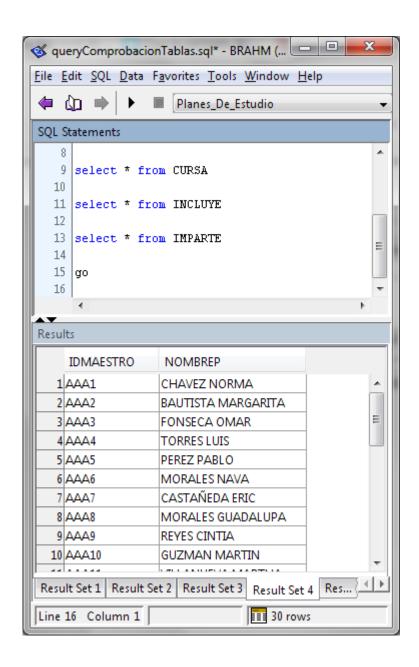
### **CARRERA**:



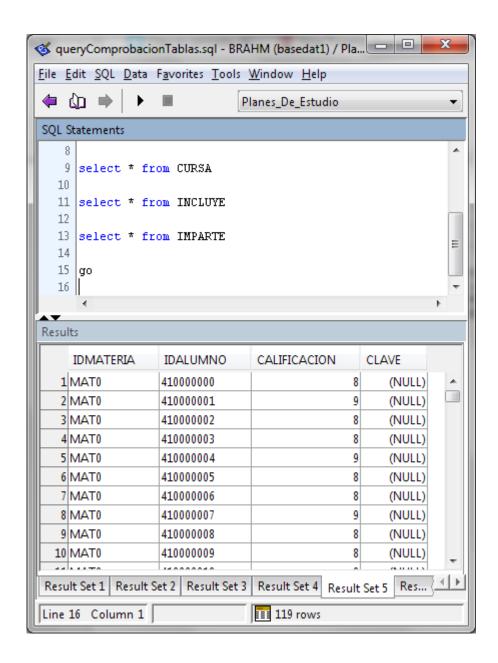
### **MATERIA:**



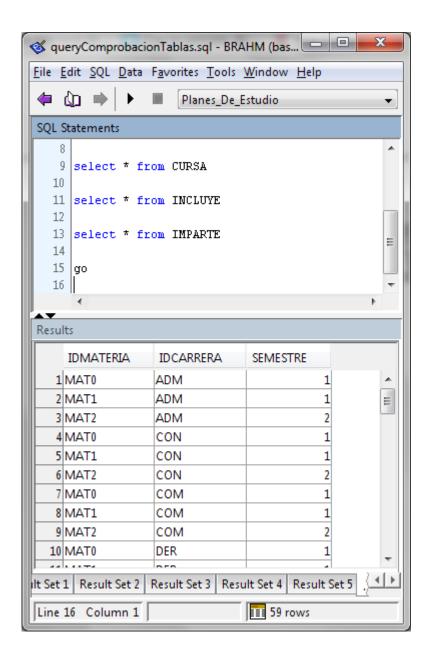
### **MAESTROS:**



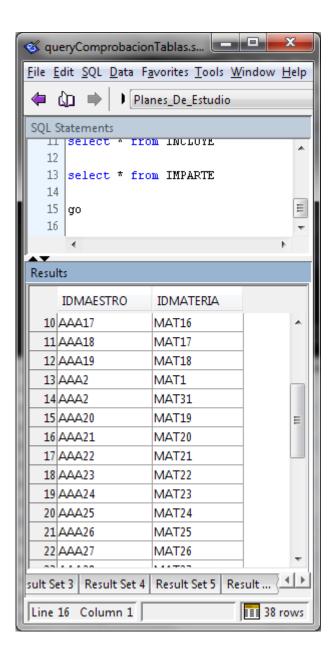
### **CURSA**:



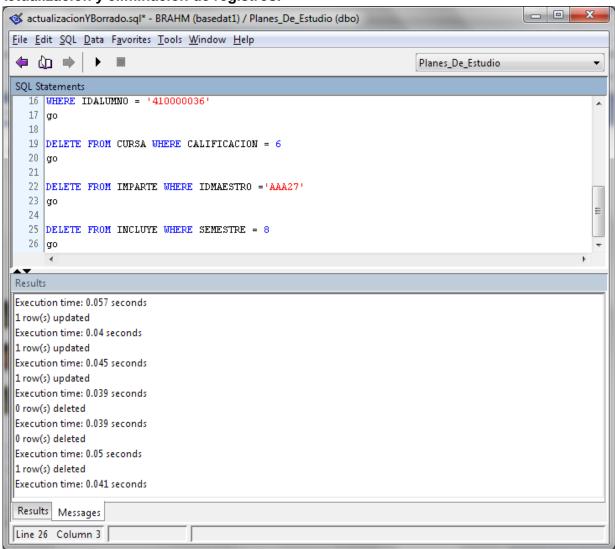
### **INCLUYE:**



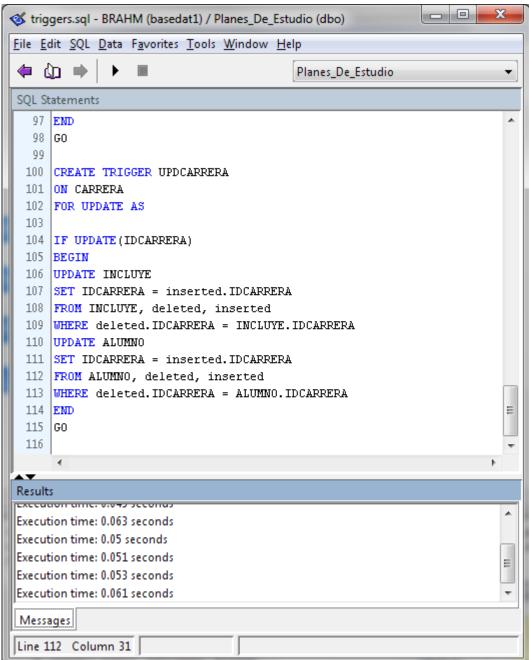
### **IMPARTE:**



Actualización y eliminación de registros:



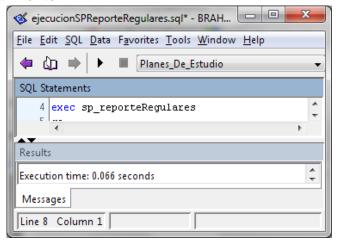
### **Triggers:**



### **Stored Procedures:**

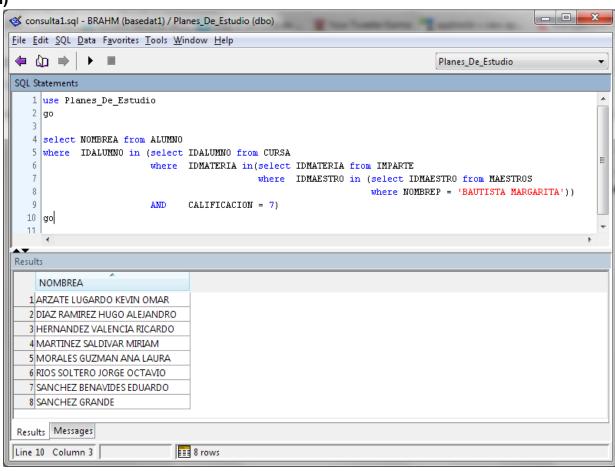
```
🅉 creaSPReporteRegulares.sql - BRAHM (basedat1) / Planes_De_Estudio (dbo)
<u>File Edit SQL Data Favorites Tools Window Help</u>
 Planes_De_Estudio
SQL Statements
   17
          if(@@sqlstatus = 2)
   18
         begin
   19
              close elCursor
   20
              return
                                                                                           Ε
   21
          end
   22
         while(@@sqlstatus = 0)
   23
        begin
   24
        if((select count(*) from ALUMNO
   25
               where IDALUMNO in (select distinct IDALUMNO from CURSA
   26
                                         where IDALUMNO = @idA
   27
                                               AND CALIFICACION > 6
   28
                                               AND IDMATERIA in (select IDMATERIA from IN(
   29
                                                                 where IDCARRERA in (sele
                                                                 AND SEMESTRE <= (sele_
   30
                                               NMD (select count(t) from INCLUVE
                        III
 Results
 Execution time: 0.05 seconds
Execution time: 0.101 seconds
 Messages
 Line 36 Column 33
```

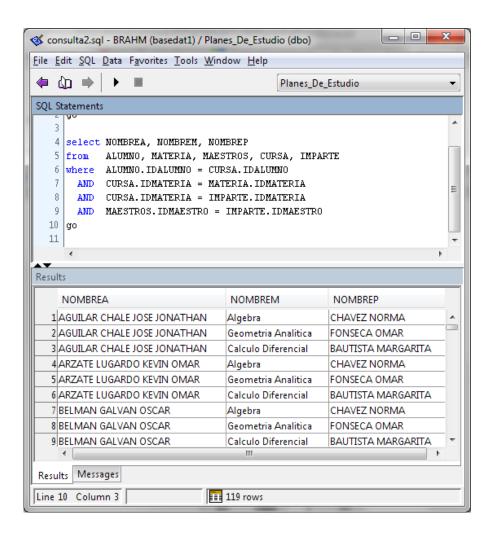
### Ejecución del procedimiento:

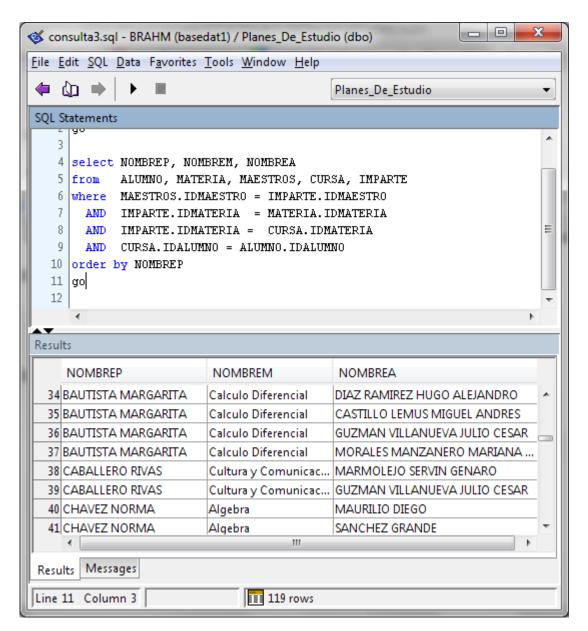


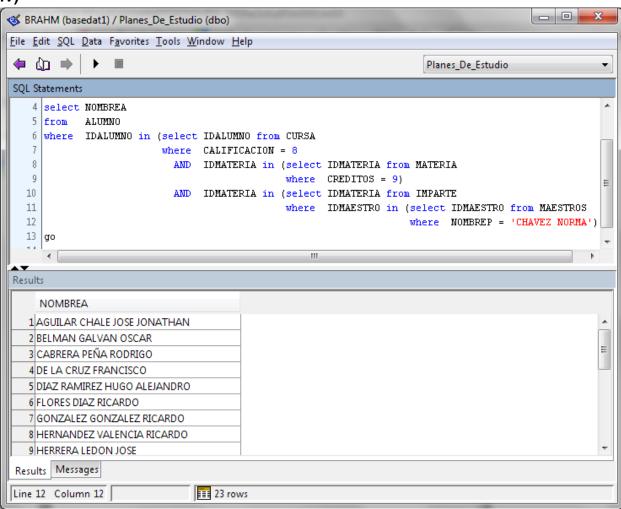
### Consultas:

I)

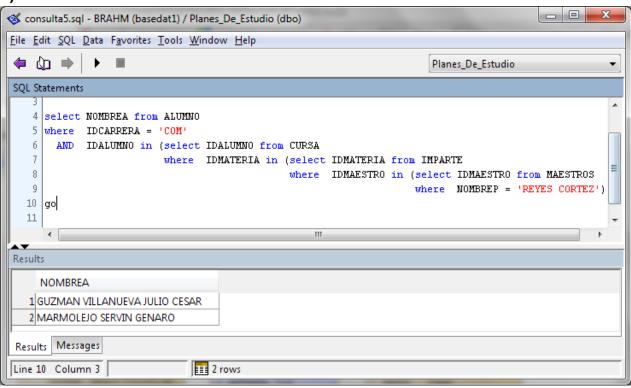








V)



#### Borrado de Base de datos:

