



**UTN.BA** FACULTAD  
REGIONAL  
BUENOS AIRES  
SECRETARÍA DE EXTENSIÓN UNIVERSITARIA FRBA UTN

**Centro de  
e-Learning**

# Diplomatura en Bases de Datos

Ejercicios de:  
Procedimientos Almacenados -  
Triggers - Subqueries



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# *Agenda*

- *Procedimientos Almacenados*
- *Triggers*
  - *Integridad referencial*
- *Subqueries*
  - *En el from*
  - *En el where*

# ***Procedimientos Almacenados***

- *Crear un contador*
- *Ejecutar el contador*
- *Crear un sumador hasta un límite*
- *Ejecutar el sumador hasta un límite*

# ***Procedimientos Almacenados***

## ***Crear un contador***

- *Le paso al SP un parámetro*
- *El SP cuando lo ejecuto cuenta hasta ese número y lo va mostrando por pantalla*

# Procedimientos Almacenados

## *Crear un contador: (Estructura)*

```
CREATE PROCEDURE <Procedure_Name, sysname, ProcedureName>
-- Add the parameters for the stored procedure here
<@Param1, sysname, @p1> <Datatype_For_Param1, , int> = <Default_Value_For_Param1, , 0>,
<@Param2, sysname, @p2> <Datatype_For_Param2, , int> = <Default_Value_For_Param2, , 0>
AS
BEGIN
    SET NOCOUNT ON;

    -- Insert statements for procedure here
    SELECT <@Param1, sysname, @p1>, <@Param2, sysname, @p2>
END
GO
```

# Procedimientos Almacenados

*Crear un contador:*

*Un solo parámetros @n del tipo entero*

```
CREATE PROCEDURE contar
-- Add the parameters for the stored procedure here
    @n int
AS
BEGIN
    SET NOCOUNT ON;

    -- Insert statements for procedure here
    SELECT <@Param1, sysname, @p1>, <@Param2, sysname, @p2>
END
GO
```

# Procedimientos Almacenados

*Crear un contador:*

*Pongo un ciclo*

```
CREATE PROCEDURE contar
-- Add the parameters for the stored procedure here
    @n int
AS
BEGIN
    SET NOCOUNT ON;

    declare @k int

    set @k = 1

    while @k<=@n
    begin
        select @k
        set @k = @k+1
    end

END
GO
```

# ***Procedimientos Almacenados***

## ***Ejecuto la creación del código***

```
CREATE PROCEDURE contar
-- Add the parameters for the stored procedure here
    @n int
AS
BEGIN
    SET NOCOUNT ON;

    declare @k int

    set @k = 1

    while @k<=@n
    begin
        select @k
        set @k = @k+1
    end
END
GO
```

0 %

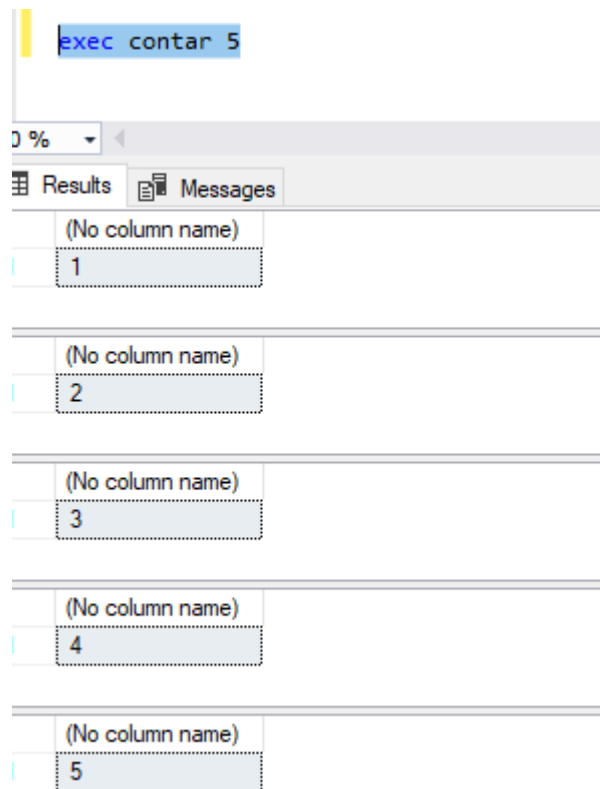
Messages

Commands completed successfully.



# Procedimientos Almacenados

## Ejecuto el procedimiento



```
exec contar 5
```

(No column name)
1
2
3
4
5

# Procedimientos Almacenados

## Creo el sumador

```
CREATE PROCEDURE sumar
-- Add the parameters for the stored procedure here
    @n int
AS
BEGIN
    SET NOCOUNT ON;

    declare @k int
    declare @s int

    set @k = 1
    set @s = 0

    while @k <= @n
    begin
        set @s = @s + @k
        set @k = @k + 1
    end

    select 'suma ', @s

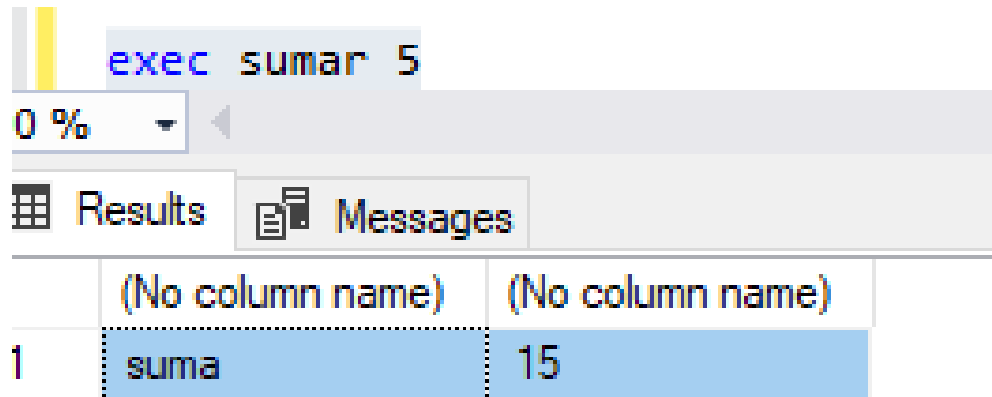
END
GO
```

Messages

Commands completed successfully.

# Procedimientos Almacenados

## Ejecuto el sumador



The screenshot shows a database execution window. At the top, the command `exec sumar 5` is entered. Below the command bar, a progress indicator shows '0 %'. There are two tabs: 'Results' (selected) and 'Messages'. The 'Results' tab displays a table with two columns, both labeled '(No column name)'. The first row of data shows the value '1' in the first column and '15' in the second column. The cell containing '15' is highlighted with a blue background.

	(No column name)	(No column name)
1	suma	15

# *Triggers*

- *Mantenemos la integridad referencial*
- *Por que NO conviene usarlos*

# Triggers

*Mantenemos actualizado último y máximo precio*

- *Tablas:*  
*Artículos*

Column Name	Data Type	Allow Nulls
IdArticulo	int	<input checked="" type="checkbox"/>
Descripcion	varchar(50)	<input checked="" type="checkbox"/>
UltimoPrecio	float	<input checked="" type="checkbox"/>
MaximoPrecio	float	<input checked="" type="checkbox"/>
FechaUltimoPrecio	date	<input checked="" type="checkbox"/>
	<input type="text" value=""/>	<input type="checkbox"/>

## Ventas

Column Name	Data Type	Allow Nulls
IdVenta	int	<input checked="" type="checkbox"/>
IdArticulo	int	<input checked="" type="checkbox"/>
Descripcion	varchar(50)	<input checked="" type="checkbox"/>
Fecha	date	<input checked="" type="checkbox"/>
Importe	float	<input checked="" type="checkbox"/>
Cantidad	<input type="text" value="int"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>

# Triggers

*Mantenemos integridad referencial*

```
CREATE TRIGGER <Schema_Name, sysname, Schema_Name>.<Trigger_Name, sysname, Trigger_Name>  
ON <Schema_Name, sysname, Schema_Name>.<Table_Name, sysname, Table_Name>  
AFTER <Data_Modification_Statements, , INSERT,DELETE,UPDATE>  
AS  
BEGIN  
    -- SET NOCOUNT ON added to prevent extra result sets from  
    -- interfering with SELECT statements.  
    SET NOCOUNT ON;  
  
    -- Insert statements for trigger here  
  
END  
GO
```

# Triggers

## *Mantenemos integridad referencial*

```
CREATE TRIGGER MantieneArticulos
ON Articulos
AFTER Delete
AS
BEGIN
    delete from Ventas where idArticulo in (select distinct idArticulo from deleted)
END
GO
```

# Triggers

## *Mantenemos integridad referencial*

```
CREATE TRIGGER MantieneArticulos
ON Articulos
AFTER Delete
AS
BEGIN
    delete from Ventas where idArticulo in (select distinct idArticulo from deleted)
END
GO
```



# Triggers

*Mantenemos integridad referencial*

*Cargo los datos:*

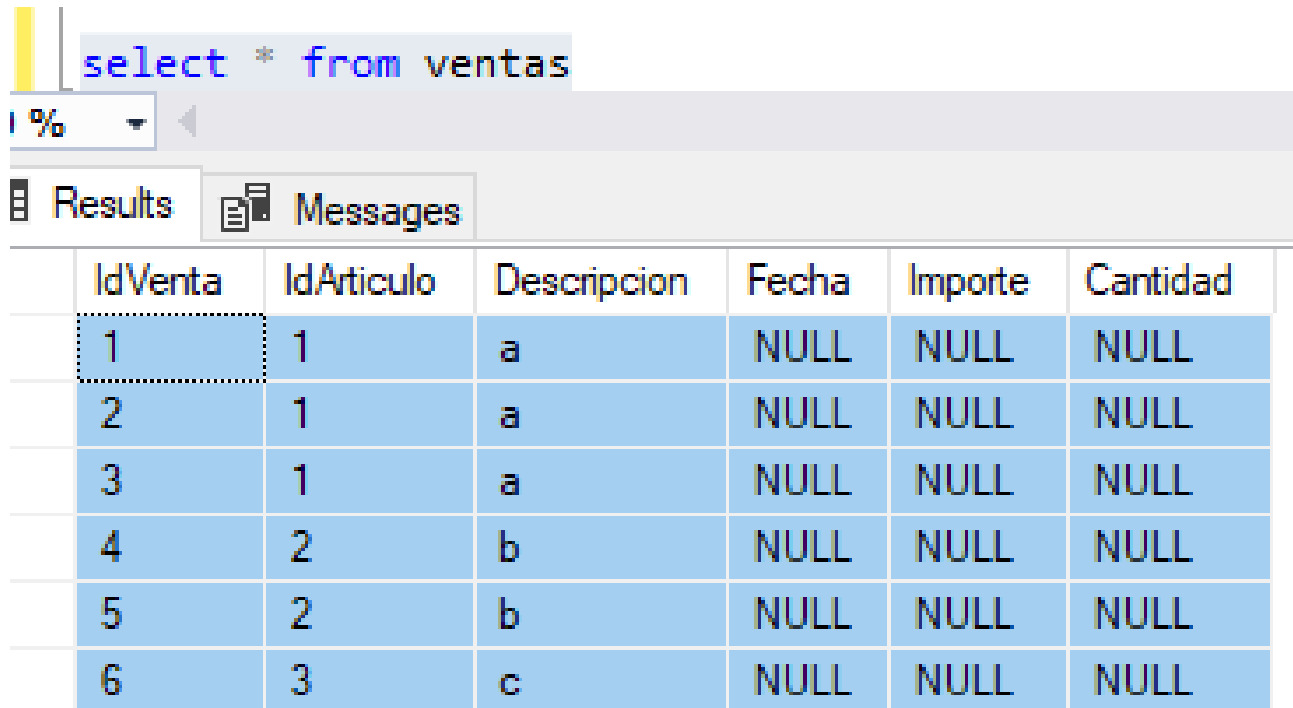
```
- insert into articulos(idarticulo,descripcion) values(1,'a')
insert into articulos(idarticulo,descripcion) values(2,'b')
insert into articulos(idarticulo,descripcion) values(3,'c')

insert into ventas(idventa,idarticulo,descripcion) values(1,1,'a')
insert into ventas(idventa,idarticulo,descripcion) values(2,1,'a')
insert into ventas(idventa,idarticulo,descripcion) values(3,1,'a')
insert into ventas(idventa,idarticulo,descripcion) values(4,2,'b')
insert into ventas(idventa,idarticulo,descripcion) values(5,2,'b')
insert into ventas(idventa,idarticulo,descripcion) values(6,3,'c')
```

# Triggers

*Mantenemos integridad referencial*

*Reviso los datos:*



The screenshot shows a database query interface. At the top, a SQL query is entered: `select * from ventas`. Below the query, there are tabs for 'Results' and 'Messages'. The 'Results' tab is active, displaying a table with 7 columns: 'Id/Venta', 'IdArticulo', 'Descripcion', 'Fecha', 'Importe', and 'Cantidad'. The table contains 6 rows of data. The first row has 'Id/Venta' 1, 'IdArticulo' 1, 'Descripcion' 'a', 'Fecha' NULL, 'Importe' NULL, and 'Cantidad' NULL. The second row has 'Id/Venta' 2, 'IdArticulo' 1, 'Descripcion' 'a', 'Fecha' NULL, 'Importe' NULL, and 'Cantidad' NULL. The third row has 'Id/Venta' 3, 'IdArticulo' 1, 'Descripcion' 'a', 'Fecha' NULL, 'Importe' NULL, and 'Cantidad' NULL. The fourth row has 'Id/Venta' 4, 'IdArticulo' 2, 'Descripcion' 'b', 'Fecha' NULL, 'Importe' NULL, and 'Cantidad' NULL. The fifth row has 'Id/Venta' 5, 'IdArticulo' 2, 'Descripcion' 'b', 'Fecha' NULL, 'Importe' NULL, and 'Cantidad' NULL. The sixth row has 'Id/Venta' 6, 'IdArticulo' 3, 'Descripcion' 'c', 'Fecha' NULL, 'Importe' NULL, and 'Cantidad' NULL.

Id/Venta	IdArticulo	Descripcion	Fecha	Importe	Cantidad
1	1	a	NULL	NULL	NULL
2	1	a	NULL	NULL	NULL
3	1	a	NULL	NULL	NULL
4	2	b	NULL	NULL	NULL
5	2	b	NULL	NULL	NULL
6	3	c	NULL	NULL	NULL

# Triggers

*Mantenemos integridad referencial*

*Borro el artículo 2 y reviso los datos:*

```
delete from articulos where idarticulo = 2
```

```
select * from ventas
```

	IdVenta	IdArticulo	Descripcion	Fecha	Importe	Cantidad
1	1	1	a	NULL	NULL	NULL
2	2	1	a	NULL	NULL	NULL
3	3	1	a	NULL	NULL	NULL
4	6	3	c	NULL	NULL	NULL

# ***Subqueries***

- *¿Qué son?*
- *¿Cómo escribirlas?*
- *Por que NO conviene usarlas*

# ***Subqueries***

- *Usamos una consulta dentro de otra:*
  - *Dentro del From*
  - *Dentro del Where*

# Subqueries dentro del From

```
select x.tmk, count(*)  
from (select * from intentos where instante between '2018-07-03' and '2018-07-06') as x  
group by x.tmk  
order by count(*)
```

Results		Messages
tmk	(No column name)	
3000	2	
3004	24	
2000	140	
2001	157	
1029	191	
1001	200	

# Subqueries dentro del Where

```

select tmk, count(*)
from intentos
where
tmk in (select distinct tmk from intentos where Instante between '2018-07-01' and '2018-07-07') and
instante between '2018-10-20' and '2018-10-26'
group by tmk
order by count(*)

```

0 %

Results Messages

	tmk	(No column name)
1	1026	1
2	3000	3
3	1030	18
4	1032	130
5	1022	151
6	1024	101



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# ¿Alguna pregunta en el tintero?



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# Muchas Gracias

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