

ELIAS ROBLERO PEREZ 3º A

ANALISIS DE LAS TABLAS Y CREACION DE INDICES QUE PERMITAN REDUCIR EL TIEMPO DE EJECUCION DE LAS SIGUIENTES SENTENCIAS:

A) OBTENER POR NEGOCIO LAS VISITAS (CHECK IN) POR DIA DE LA SEMANA

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL statement:

```
select b.name, c.date from business b, checkin c
where b.id = c.business_id
```

The Results pane displays the following data:

	name	date
1	The Wight Place	Sunday-23:00
2	The Wight Place	Sunday-22:00
3	The Wight Place	Sunday-21:00
4	The Wight Place	Sunday-17:00
5	The Wight Place	Sunday-20:00
6	The Wight Place	Sunday-0:00
7	The Wight Place	Sunday-2:00
8	The Wight Place	Friday-16:00
9	The Wight Place	Friday-21:00
10	The Wight Place	Friday-18:00
11	The Wight Place	Friday-23:00

The status bar at the bottom indicates: Query executed successfully. DESKTOP-4VLOPV2 (11.0 RTM) | DESKTOP-4VLOPV2\Elias ... | yelp | 00:01:09 | 3738750 rows

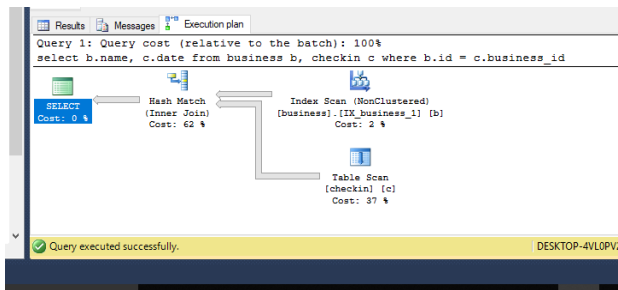
The screenshot shows the same SQL query in the query editor, but the Execution plan pane is visible. The query is:

```
select b.name, c.date from business b, checkin c
where b.id = c.business_id
```

The execution plan shows the following steps:

- SELECT (Cost: 0 %)
- Hash Match (Inner Join) (Cost: 62 %)
- Index Scan (NonClustered) [business].[IX_business_id] [b] (Cost: 2 %)
- Table Scan [checkin] [c] (Cost: 37 %)

The status bar at the bottom indicates: Query executed successfully. DESKTOP-4VLOPV2 (11.0 RTM) | DESKTOP-4VLOPV2\Elias ... | yelp | 00:01:06 | 3738750 rows



B) OBTENER POR ESTADO Y CIUDAD LA CANTIDAD DE NEGOCIOS

Select state, city, count(*) totalNegocios from business b

Group by city, state

SQLQuery1.sql - DESKTOP-4VL0PV2.yelp (DESKTOP-4VL0PV2\Elias Roblero Perez (52)) - Microsoft SQL Server Management Studio

```
File Edit View Query Project Debug Tools Window Help
```

Object Explorer

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SQLQuery1.sql - DE...Roblero Perez (52)

```
select state, city, count(*) totalNegocios from business b
group by city, state
```

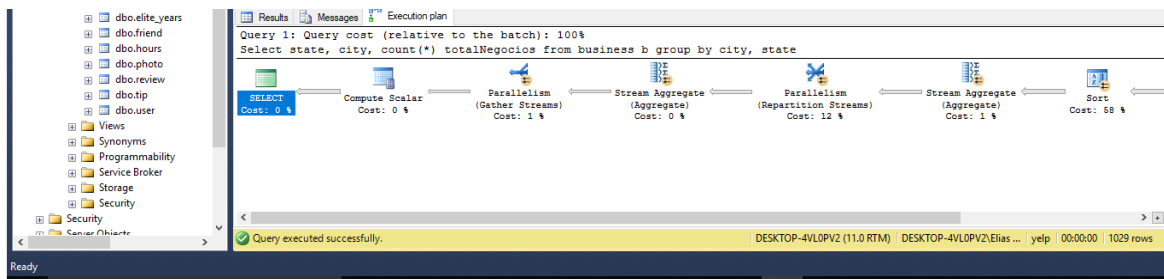
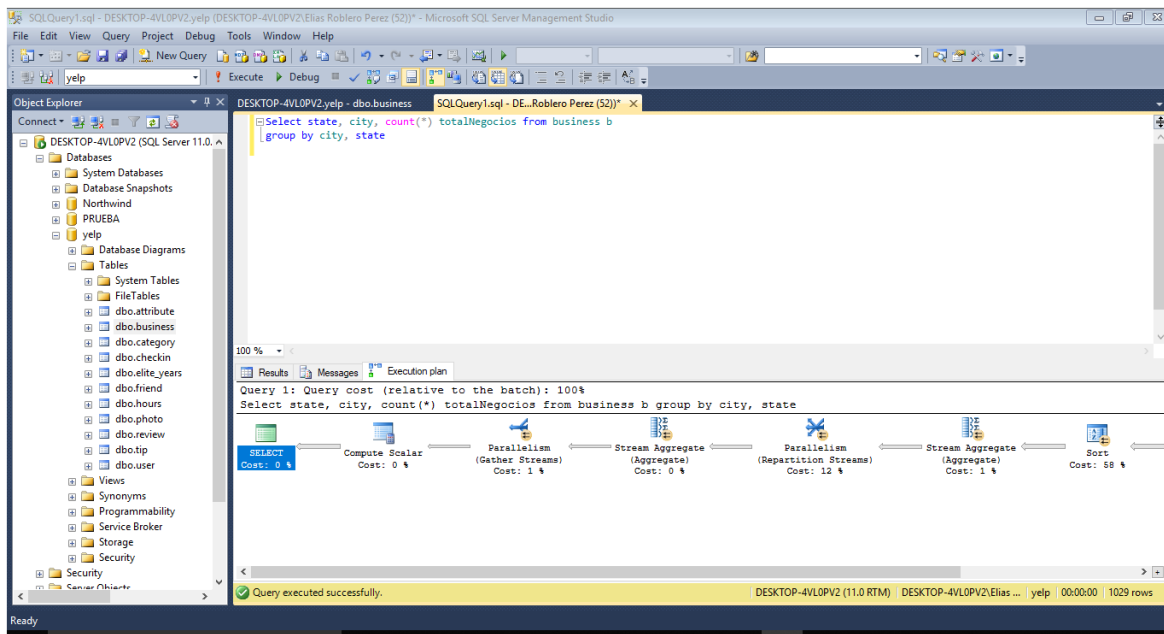
100 %

Results Messages Execution plan

	state	city	totalNegocios
1	75	Saint-Antoine	1
2	AL	North Las Vegas	1
3	AZ	Desert Ridge	1
4	AZ	Fountain Hills	278
5	AZ	Gilbert	2835
6	AZ	Gilbert AZ	1
7	AZ	Goodyear	703
8	AZ	Goodyear AZ	1
9	AZ	Higley	20
10	AZ	Uitchfield	3
11	AZ	Old Town Scottsdale	1

Query executed successfully. DESKTOP-4VL0PV2 (11.0 RTM) DESKTOP-4VL0PV2\Elias ... yelp 00:00:00 1029 rows

Ready Ln 2 Col 2 Ch 2 INS



C) OBTENER POR NEGOCIO CUANTAS CATEGORIAS TIENEN ASIGNADAS

Select b.name, count (c.category) totalCategory from business b inner join

Category c on (b.id = c.business_id)

group by name

SQLQuery1.sql - DESKTOP-4VLOPV2.yelp (DESKTOP-4VLOPV2:Elias Roblero Perez (S2)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Object Explorer

Connect + DESKTOP-4VLOPV2 (SQL Server 11.0) ^

Databases

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yelp

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Security

Security

Server Objects

SQLQuery1.sql - DE...Roblero Perez (S2) *

```

Select b.name, count (c.category) totalCategory from business b inner join
Category c on (b.id = c.business_id)
group by name

```

100 %

Results Messages Execution plan

	name	totalCategory
1	INCHARGE Phone Repair	5
2	One Stop Medical Centre	4
3	Designer Fragrances & Cosmetic Company	3
4	Frame Fixer	5
5	Montevista Hospital	3
6	Just Dogs	2
7	Heman Brown	5
8	Try Word Ministries	2
9	Now and Zen Massage Therapy	4
10	Roast Butcher	4
11	Bovities Bridal	4

Query executed successfully. DESKTOP-4VLOPV2 (11.0 RTM) DESKTOP-4VLOPV2:Elias... yelp 00:00:03 117715 rows

Ready Ln 4 Col 1 Ch 1 INS

SQLQuery1.sql - DESKTOP-4VLOPV2.yelp (DESKTOP-4VLOPV2:Elias Roblero Perez (S2)) - Microsoft SQL Server Management Studio

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SQLQuery1.sql - DE...Roblero Perez (S2) *

```

Select b.name, count (c.category) totalCategory from business b inner join
Category c on (b.id = c.business_id)
group by name

```

100 %

Results Messages Execution plan

Query 1: Query cost (relative to the batch): 100%

Select b.name, count (c.category) totalCategory from business b inner join Category c on (b.id = c.business_id) group by name

SELECT Cost: 0 %

Parallelism (Gather Streams) Cost: 1 %

Compute Scalar Cost: 0 %

Hash Match (Aggregate) Cost: 35 %

Parallelism (Repartition Streams) Cost: 14 %

Hash Match (Inner Join) Cost: 28 %

Parallelism (Repartition Streams) Cost: 1 %

Parallelism (Repartition Streams) Cost: 11 %

Query executed successfully. DESKTOP-4VLOPV2 (11.0 RTM) DESKTOP-4VLOPV2:Elias... yelp 00:00:03 117715 rows

Ready

Results Messages Execution plan

Query 1: Query cost (relative to the batch): 100%

Select b.name, count (c.category) totalCategory from business b inner join Category c on (b.id = c.business_id) group by name

SELECT Cost: 0 %

Parallelism (Gather Streams) Cost: 1 %

Compute Scalar Cost: 0 %

Hash Match (Aggregate) Cost: 35 %

Parallelism (Repartition Streams) Cost: 14 %

Hash Match (Inner Join) Cost: 28 %

Parallelism (Repartition Streams) Cost: 1 %

Parallelism (Repartition Streams) Cost: 11 %

Query executed successfully. DESKTOP-4VLOPV2 (11.0 RTM) DESKTOP-4VLOPV2:Elias... yelp 00:00:03 117715 rows

Ready

D) OBTENER LA CANTIDAD DE USUARIOS POR NEGOCIOS Y ESTADO

E) OBTENER EL TOTAL DE NEGOCIOS POR ESTADO Y CATEGORIA

select state, count(*) totalNegocios from business b
group by state

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL query:

```
select state, count(*) totalNegocios from business b  
group by state
```

The query has been executed successfully, and the results are displayed in the Results pane. The results show the state and the total number of businesses (totalNegocios) for each state.

state	totalNegocios
01	6
3	1
75	1
ABE	2
AL	2
AZ	47376
BW	3071
BY	4
C	32
CA	6
DE	1

The status bar at the bottom indicates that the query was executed successfully and returned 51 rows.

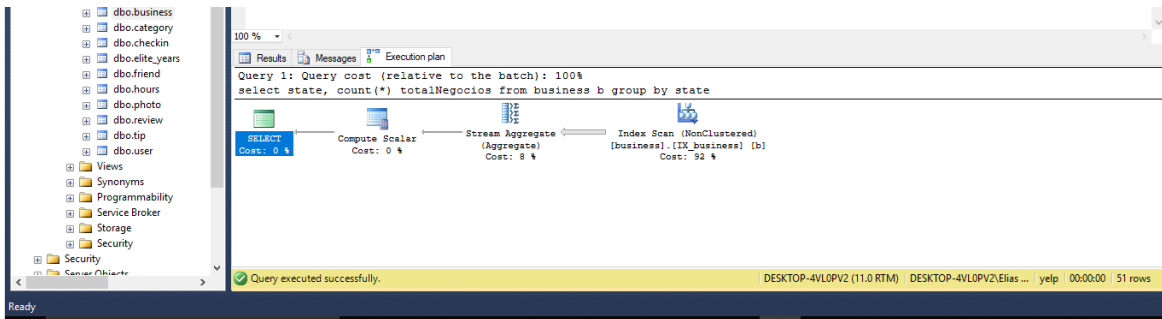
The screenshot shows the same Microsoft SQL Server Management Studio interface, but with the Execution plan pane open. The query is the same as in the previous screenshot:

```
select state, count(*) totalNegocios from business b  
group by state
```

The execution plan shows the following steps:

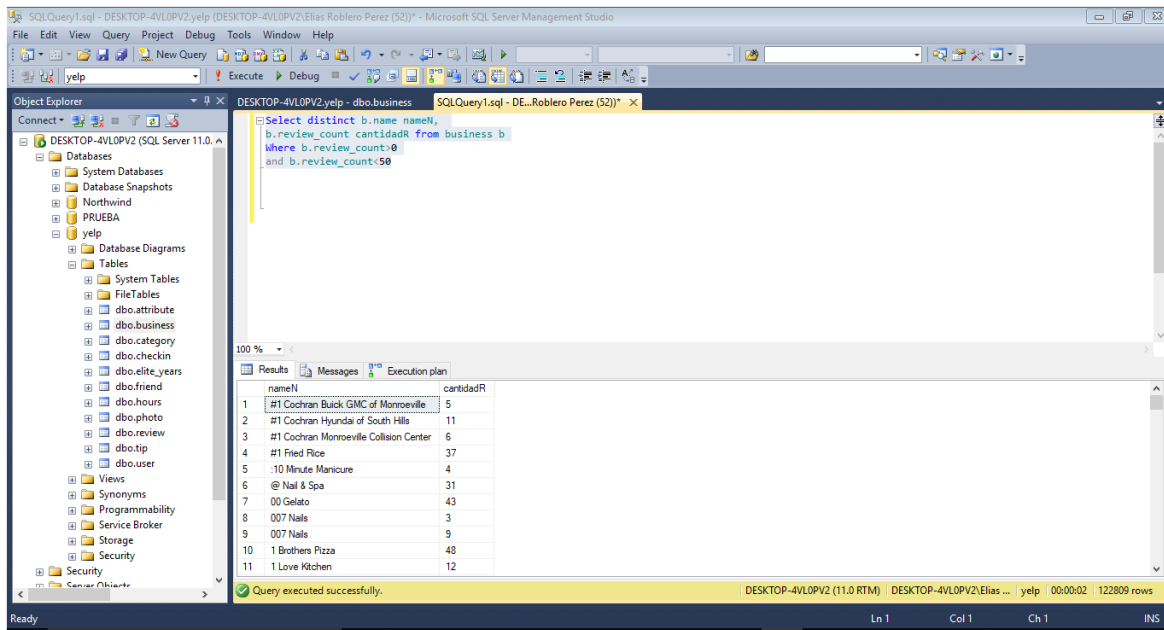
- SELECT (Cost: 0 %)
- Compute Scalar (Cost: 0 %)
- Stream Aggregate (Aggregate) (Cost: 0 %)
- Index Scan (NonClustered) (business].[ID_business] (b)) (Cost: 92 %)

The status bar at the bottom indicates that the query was executed successfully and returned 51 rows.



F) OBTENER TODOS LOS NEGOCIOS QUE TIENEN MENOS DE 50 REVIEWS (NO INCLUIR LOS QUE TIENEN 0 REVIEWS)

Select distinct b.name nameN,
b.review_count cantidadR from business b
Where b.review_count>0
and b.review_count<50



SQLQuery1.sql - DESKTOP-4VL0PV2.yelp (DESKTOP-4VL0PV2:Elias Roblero Perez (52)) - Microsoft SQL Server Management Studio

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SQLQuery1.sql - DE...Roblero Perez (52)*

```
Select distinct b.name nameN,  
b.review_count cantidadR from business b  
Where b.review_count>0  
and b.review_count<50
```

100 %

Results Messages Execution plan

Query 1: Query cost (relative to the batch): 100%

Select distinct b.name nameN, b.review_count cantidadR from business b Where b.review_count>0 and b.review_count<50

Missing Index (Impact 27.9063): CREATE NONCLUSTERED INDEX [<Name of Missing Index, sysname,>] ON [dbo].[business] ([review_count]...

Execution plan diagram:

- SELECT (Cost: 0 %)
- Parallelism (Gather Streams) (Cost: 4 %)
- Sort (Distinct Sort) (Cost: 53 %)
- Parallelism (Repartition Streams) (Cost: 13 %)
- Clustered Index Scan (Clustered) ([business].[PK_business] [b]) (Cost: 30 %)

Query executed successfully. DESKTOP-4VL0PV2 (11.0 RTM) DESKTOP-4VL0PV2:Elias ... yelp 00:00:02 122809 rows

Object Explorer

- dbo.checkin
- dbo.elite_years
- dbo.friend
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SQLQuery1.sql - DE...Roblero Perez (52)*

```
Query 1: Query cost (relative to the batch): 100%
```

Select distinct b.name nameN, b.review_count cantidadR from business b Where b.review_count>0 and b.review_count<50

Missing Index (Impact 27.9063): CREATE NONCLUSTERED INDEX [<Name of Missing Index, sysname,>] ON [dbo].[business] ([review_count]...

Execution plan diagram:

- SELECT (Cost: 0 %)
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- Parallelism (Repartition Streams) (Cost: 13 %)
- Clustered Index Scan (Clustered) ([business].[PK_business] [b]) (Cost: 30 %)

Query executed successfully. DESKTOP-4VL0PV2 (11.0 RTM) DESKTOP-4VL0PV2:Elias ... yelp 00:00:02 122809 rows

G) OBTENER LOS USUARIOS QUE FRECUENTAN MAS DE 4 NEGOCIOS, MOSTRAR LA INFORMACION POR ESTADO