**Information System Department**

**Faculty of Computers and Information**

**Cairo, Egypt**

**Data Warehousing**

**Academic Year 2014/2015**

**Phase #2**

**DB source name: Credit DB**

***Done By: Islam Ibrahim***

MemberDim Query:-

select member.member\_no,

member.lastname as member\_name, member.phone\_no as member\_phone

from member

MemberDim details:-

1- Dimension: MemberDim.

2- Dimension level: No levels.

3- Dimension Attributes: member\_no, member\_name, member\_Phone.

4- Dimension Measures: No measures.

5- Dimension Sources : all attributes are extracted from the member table from CreditDB.

6- Equation of Transformation: No equations.

ProviderDim Query:-

select provider.provider\_no,

provider.provider\_name, provider.country as provider\_country

from provider

ProviderDim details:-

1- Dimension: ProviderDim.

2- Dimension level: No levels.

3- Dimension Attributes: provider\_no, provider\_name, provider.country.

4- Dimension Measures: No measures.

5- Dimension Sources : all attributes are extracted from the provider table from CreditDB.

6- Equation of Transformation: No equations.

CorporationDim Query:-

select corporation.corp\_no, corporation.city,

corporation.corp\_name, corporation.phone\_no,

corporation.country

from corporation

CorporationDim details:-

1- Dimensions: CorporationDim.

2- Dimension level: two levels ( city, country ).

3- Dimension Attributes: corp\_no, corp\_name, phone\_no, country.

4- Dimension Measures: No measures.

5- Dimension Sources : all attributes are extracted from the corporation table from CreditDB.

6- Equation of Transformation: No equations.

DateDim Query:-

select charge.charge\_dt, DAY(charge.charge\_dt) as charge\_day,

MONTH(charge.charge\_dt) as charge\_month,

YEAR(charge.charge\_dt) as charge\_year

from charge

DateDim details:-

1- Dimensions: DateDim.

2- Dimension level: three levels ( day, month, year ).

3- Dimension Attributes: charge\_day, charge\_month, charge\_year.

4- Dimension Measures: No measures.

5- Dimension Sources : all attributes are extracted from the charge table from CreditDB.

6- Equation of Transformation: No equations.

ChargeFact Query:-

select SUM(charge.charge\_amt) as total\_charges,

SUM(payment.payment\_amt) as total\_payments,

member.member\_no, provider.provider\_no,

corporation.corp\_no,charge.charge\_dt

from charge,payment,member,provider,corporation

where member.corp\_no=corporation.corp\_no

and payment.member\_no=member.member\_no

and charge.member\_no=member.member\_no

and charge.provider\_no=provider.provider\_no

group by member.member\_no, provider.provider\_no,

corporation.corp\_no,charge.charge\_dt

ChargeFact details:-

2- Fact level: No levels.

3- Fact Attributes: total\_charges, total\_payments, member\_no, provider\_no, corp\_no, charge\_dt.

4- Fact Measures: total\_charges, total\_payments.

5- Fact Sources : total\_charges, charge\_dt are extracted form charge table from CreditDB, total\_payments is extracted from payment table from CreditDB, member\_no is extracted from member table from CreditDB, provider\_no is extracted from provider table from CreditDB, corp\_no is extracted from corporation table from CreditDB.

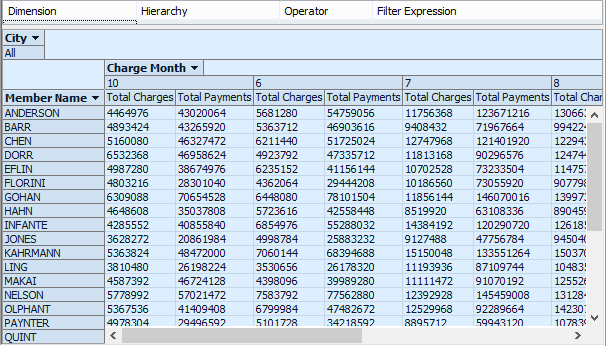
6- Equation of Transformation:

1- total\_charges = SUM(charge.charge\_amt)

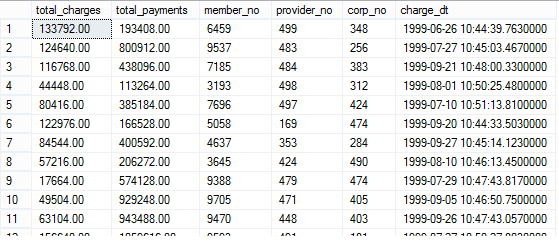
2- total\_payments = SUM(payment.payment\_amt)

**The Data Warehouse Schema Filled with Data:**

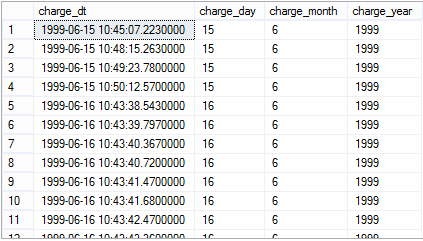
In the cube

****

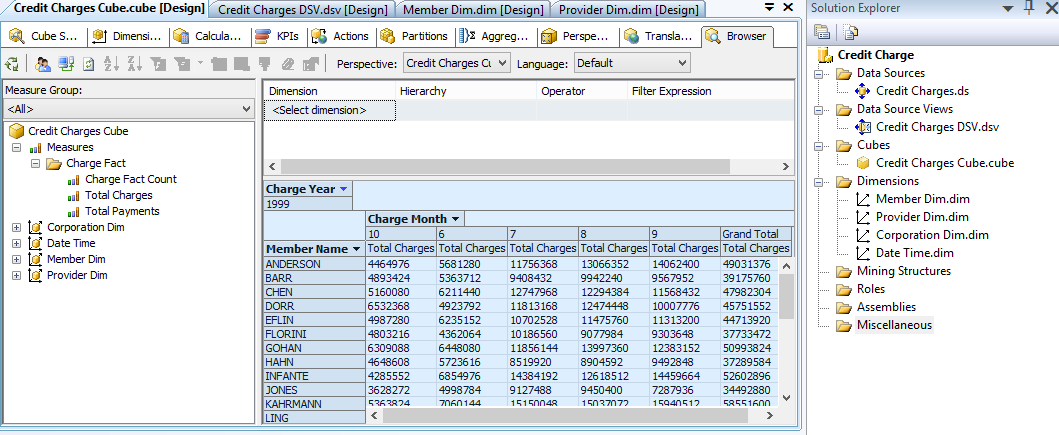
Charge Fact table in SQL server



DateTime dimension in SQL server

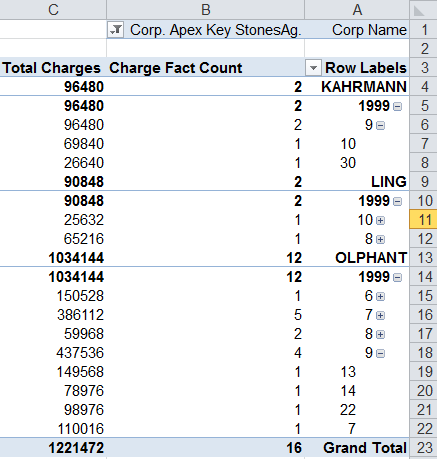


**Our Cube for analysis in Visual studio:**

****

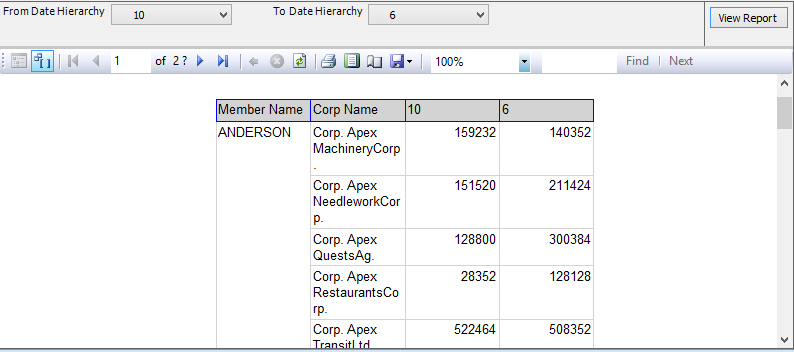
**Excel report:**

The report shows the member and total charges for the data hierarchy filtered by the Corporation "Apex key StonesAg."



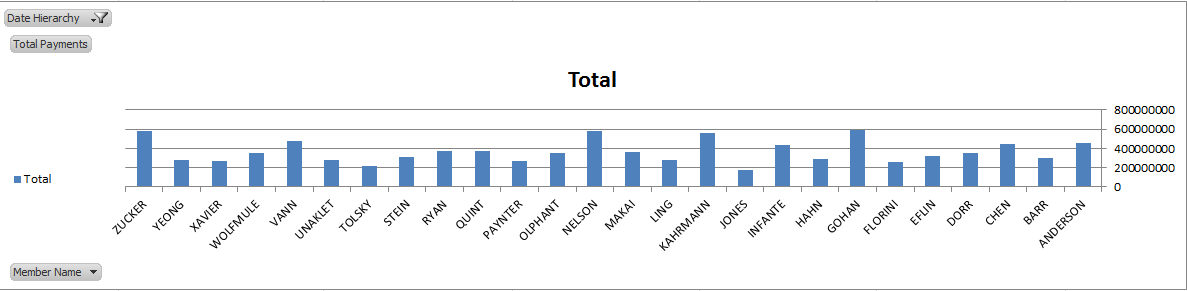
**Extra report (bonus part):**

The report generated by Visual studio and shows the member and corporation names and the total charge for several months



**Excel graph:**

The graph shows the member names versus the total payments.

****

**MDX Query (Two children function):**

SELECT [Member Dim].[Member Name].children on rows,

[Date Time].[Charge Month].children on columns

FROM [Credit Charges Cube]

WHERE [Measures].[Total Payments]