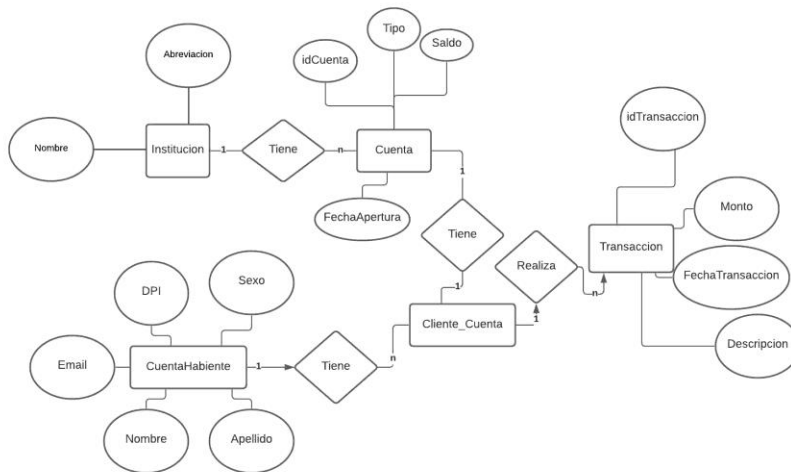Juan Jose Lima Ramirez
201503738

Correcciones a modelos

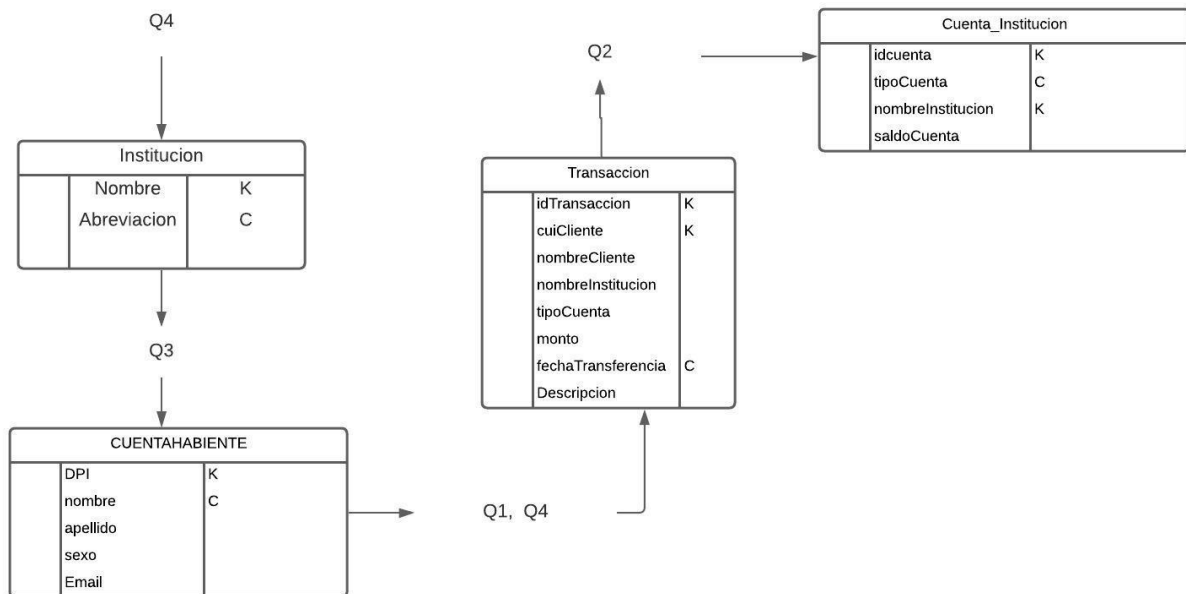Se modificaron los modelos conceptuales y lógicos ya que se habían maquetado de mala forma, no se coloco la nomenclatura adecuada además de esto no se colocaron las llaves primarias y los clusters.

Adicional a esto se replantearon los dos modelos ya que no se adaptaban del todo a las consultas solicitadas, por lo que tanto el modelo conceptual como lógico sufrieron cambios los cuales se muestran a continuación.

Modelo conceptual:

Modelo Lógico:

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Creación de tablas

```
cqlsh:proyecto> describe table institucion;

CREATE TABLE proyecto.institucion (
    nombre text,
    abreviacion text,
    PRIMARY KEY (nombre, abreviacion)
) WITH CLUSTERING ORDER BY (abreviacion DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold':
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto>
 timestamp,

 ext,

 t,
 t,

 dTransaccion). fechaCreacion. fechaOperacion)
```

```
cqlsh:proyecto> describe table cuentahabiente;

CREATE TABLE proyecto.cuentahabiente (
    dpi bigint,
    nombre text,
    apellido text,
    email text,
    sexo text,
    telefono int,
    PRIMARY KEY (dpi, nombre)
) WITH CLUSTERING ORDER BY (nombre DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32',
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto>
```

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```
cqlsh:proyecto> describe table CUENTA;

CREATE TABLE proyecto.cuenta (
    idcuenta bigint,
    fechaapertura timestamp,
    saldo int,
    tipo text,
    PRIMARY KEY (idcuenta, fechaapertura)
) WITH CLUSTERING ORDER BY (fechaapertura DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32',
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto>
```

```
cqlsh:proyecto> DESCRIBE TABLE CLIENTE_CUENTA;

CREATE TABLE proyecto.cliente_cuenta (
    idcuenta bigint,
    idcliente bigint,
    tipocuenta text,
    nombrecliente text,
    nombreinstitucion text,
    saldocuenta bigint,
    PRIMARY KEY ((idcuenta, idcliente), tipocuenta)
) WITH CLUSTERING ORDER BY (tipocuenta DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32',
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto>
```

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```
cqlsh:proyecto> describe table transaccion;

CREATE TABLE proyecto.transaccion (
    idtransaccion bigint,
    cuicliente bigint,
    fechatransferencia timestamp,
    descripcion text,
    monto bigint,
    nombrecliente text,
    nombreinstitucion text,
    tipocuenta text,
    PRIMARY KEY ((idtransaccion, cuicliente), fechatransferencia)
) WITH CLUSTERING ORDER BY (fechatransferencia DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compre
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto>
```

ESP   23:34
LAA   28/04/2021

```
cqlsh:proyecto> describe table cuenta_institucion;

CREATE TABLE proyecto.cuenta_institucion (
    idcuenta bigint,
    nombreinstitucion text,
    tipocuenta text,
    saldocuenta bigint,
    PRIMARY KEY ((idcuenta, nombreinstitucion), tipocuenta)
) WITH CLUSTERING ORDER BY (tipocuenta DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32',
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto>
```

ESP   13:13
LAA   28/04/2021

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201503738

```
cqlsh:proyecto> describe table transacciones;

CREATE TABLE proyecto.transacciones (
    idtransaccion bigint,
    fechadebito timestamp,
    fechacredito timestamp,
    idcuentacredito bigint,
    idcuentadebito bigint,
    monto bigint,
    nombreinstitucioncredito text,
    nombreinstituciondebito text,
    tipocuentacredito text,
    tipocuentadebito text,
    PRIMARY KEY (idtransaccion, fechadebito, fechacredito)
) WITH CLUSTERING ORDER BY (fechadebito DESC, fechacredito DESC)
    AND bloom_filter_fp_chance = 0.01
    AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
    AND comment = ''
    AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32',
'min_threshold': '4'}
    AND compression = {'chunk_length_in_kb': '64', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
    AND crc_check_chance = 1.0
    AND dclocal_read_repair_chance = 0.1
    AND default_time_to_live = 0
    AND gc_grace_seconds = 864000
    AND max_index_interval = 2048
    AND memtable_flush_period_in_ms = 0
    AND min_index_interval = 128
    AND read_repair_chance = 0.0
    AND speculative_retry = '99PERCENTILE';

cqlsh:proyecto> _
```
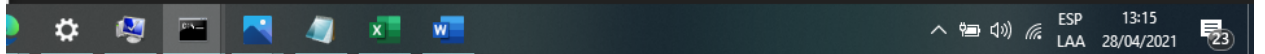
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201503738

Reportes

Operaciones realizadas por cuentahabiente

```
cqlsh:proyecto> select cuiCliente, nombreCliente, tipoCuenta, monto,descripcion, fechaTransferencia
            ... from transaccion
            ... where cuiCliente = 2344960856 allow filtering;

 cuicliente | nombrecliente | tipocuenta      | monto | descripcion | fechatransferencia
------------+---------------+-----------------+-------+-------------+----------------------------------
 2344960856 |         Alfie | Monetaria en Q  |  9456 |     Credito | 2020-03-21 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  7846 |      Debito | 2020-03-18 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  6470 |     Credito | 2020-10-28 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  3414 |      Debito | 2020-09-14 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  9454 |     Credito | 2020-10-29 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  8855 |      Debito | 2021-02-19 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  3874 |      Debito | 2021-01-13 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  8776 |      Debito | 2020-02-07 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  9995 |     Credito | 2020-07-10 18:00:00.000000+0000
 2344960856 |         Alfie |          Ahorro |  7205 |     Credito | 2020-06-17 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |   653 |      Debito | 2021-03-04 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  7170 |     Credito | 2021-01-27 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  6835 |     Credito | 2020-10-31 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  3745 |      Debito | 2020-10-16 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  7091 |     Credito | 2021-02-17 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  3597 |      Debito | 2020-03-02 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  1034 |     Credito | 2020-11-08 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  6782 |     Credito | 2020-04-14 18:00:00.000000+0000
 2344960856 |         Alfie |          Ahorro |  8245 |     Credito | 2020-10-10 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  8521 |      Debito | 2020-01-17 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  4935 |      Debito | 2020-03-03 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  3567 |     Credito | 2020-01-01 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  2606 |     Credito | 2020-03-14 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  5131 |      Debito | 2021-03-11 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  9717 |      Debito | 2020-08-17 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  7349 |     Credito | 2020-10-21 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  5463 |     Credito | 2021-02-08 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  9675 |     Credito | 2020-07-26 18:00:00.000000+0000
 2344960856 |         Alfie |          Ahorro |   554 |      Debito | 2021-03-07 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  7237 |      Debito | 2020-05-21 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  5561 |      Debito | 2020-07-11 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en $  |  7753 |     Credito | 2020-10-05 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  9454 |      Debito | 2020-10-29 18:00:00.000000+0000
 2344960856 |         Alfie | Monetaria en Q  |  4761 |     Credito | 2020-05-04 18:00:00.000000+0000

(34 rows)
cqlsh:proyecto>
```

```
cqlsh:proyecto> select count(*)
            ... from transaccion
            ... where cuiCliente = 2344960856 allow filtering
            ... ;

 count
-------
    34

(1 rows)
cqlsh:proyecto>
```

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Reporte de totales de créditos y débitos para la institución Banco Promerica

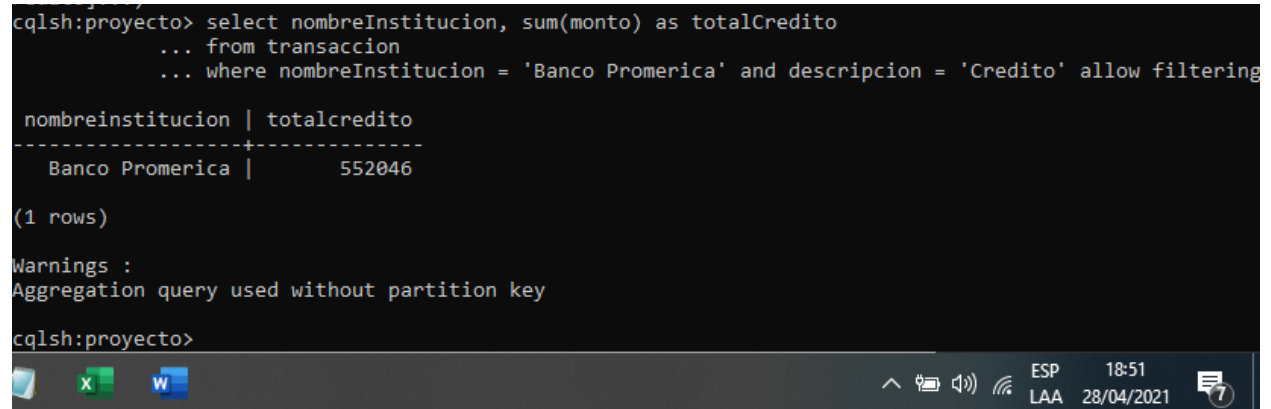## Total crédito

```
cqlsh:proyecto> select nombreInstitucion, sum(monto) as totalCredito
            ... from transaccion
            ... where nombreInstitucion = 'Banco Promerica' and descripcion = 'Credito' allow filtering

 nombreinstitucion | totalcredito
-------------------+-------------
   Banco Promerica |       552046

(1 rows)

Warnings :
Aggregation query used without partition key

cqlsh:proyecto>
```

Total debito

```
cqlsh:proyecto> select nombreInstitucion, sum(monto) as totalDebito
            ... from transaccion
            ... where nombreInstitucion = 'Banco Promerica' and descripcion = 'Debito' allow filtering;

 nombreinstitucion | totaldebito
-------------------+-------------
   Banco Promerica |       710735

(1 rows)

Warnings :
Aggregation query used without partition key

cqlsh:proyecto>
```
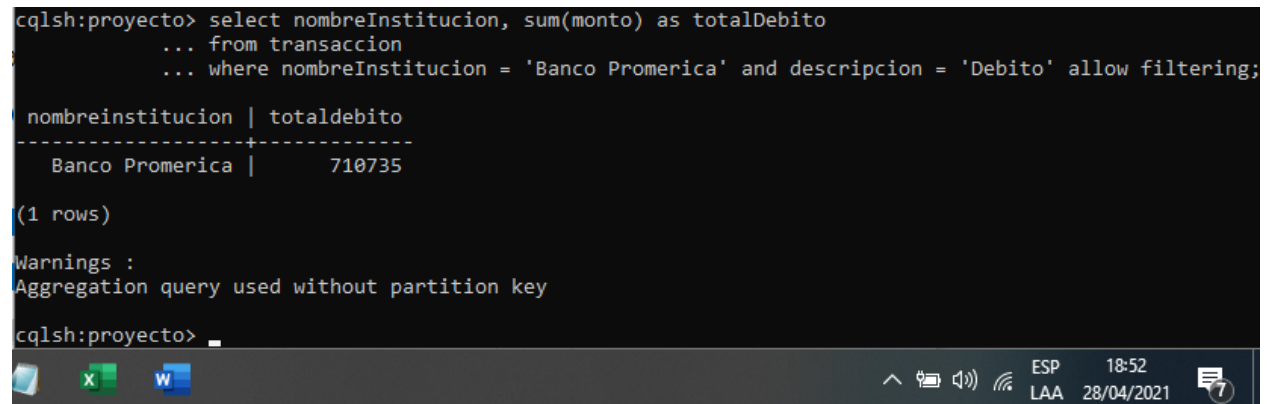
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201503738

Reporte cuentahabientes

```
cqlsh:proyecto> select * from cuentahabiente;

 dpi        | nombre    | apellido          | email                        | sexo
------------+-----------+-------------------+------------------------------+--------
 7422400781 |   Phaidra |       Thornthwaite |       pthornthwaitea@reddit.com | Female
 6920115220 |    Morgun |             Coots |        mcoots11@reuters.com | Female
 3179095431 |      Inga |       Cromleholme |    icromleholmet@artisteer.com | Female
 5878519224 |      Paul |           Fleming |            pflemingz@ft.com |   Male
 7361225500 | Alexander |              Amor |        aamor2n@tinyurl.com | Female
 2720935689 |     Daffy |           Marages |           dmarages8@360.cn |   Male
 2344960856 |     Alfie |       Castellaccio |     acastellaccio1c@wsj.com | Female
 1962610551 |     Nelia |           Hathway |       nhathway2f@joomla.org | Female
 4474118367 |      Puff |            Huerta |     phuerta1x@opensource.org | Female
 3345353652 |   Vassili |         Drowsfield |     vdrowsfield2k@devhub.com |   Male
 1653130695 |   Horatia |          Brumpton |     hbrumpton1k@engadget.com | Female
 5413394497 |      Zack | Stainton - Skinn |  zstaintonskinn2c@plala.or.jp | Female
 6981272008 |    Kizzie |           Pettman |       kpettman1j@weebly.com | Female
 1432225464 |   Chrissy |             Fells |      cfells17@eventbrite.com | Female
 1187255777 |   Abigale |             Crann |      acrann1g@cafepress.com |   Male
 3418211453 |     Ardys |              Cave |          acave2e@unblog.fr |   Male
 8068530312 |    Luelle |         Barenskie |        lbarenskie16@about.me |   Male
  930849132 |  Bobbette |            Dutton |         bdutton6@hao123.com | Female
 7589827045 |     Leann |           Buncher |         lbuncheri@scribd.com | Female
  270162925 |  Giordano |          Rimington |        grimingtonb@tmall.com | Female
 2286509069 |     Devin |            Sheere |      dsheere23@bluehost.com | Female
  208181717 |     Boote |              Pina |           bpina24@npr.org |   Male
 7154849568 |   Burgess |             Goudy |        bgoudy1a@reference.com |   Male
 1581008589 |     Caryn |           Kirkham |       ckirkhamf@instagram.com | Female
 3601075148 |    Willie |            Brahan |        wbrahane@symantec.com | Female
 1909436437 |      Hali |           Peebles |        hpeebles12@gizmodo.com |   Male
 6290621491 |       Ike |           Nickels |       inickels25@squidoo.com |   Male
 9158606432 |   Gearard |              Laye |         glaye2j@oaic.gov.au |   Male
 4464029000 |    Sascha |           Kennedy |        skennedyc@cam.ac.uk |   Male
 5981356200 |    Gracia |          Burchill |        gburchill1@baidu.com | Female
 7819264039 |     Arlin |           Bruckner |       abruckner2h@nasa.gov |   Male
 9488599294 |    Leonid |            Berrey |      lberrey2b@123-reg.co.uk | Female
 9622621546 |   Cherise |           Pluvier |        cpluvier2o@hao123.com |   Male
 6668839878 |      Tina |        De Beauchemp |  tdebeauchemp10@senate.gov | Female
 6467582497 |      Deni |              Tarn |         dtarn1u@cornell.edu | Female
 7964176803 |     Neill |             Esser |        nesserh@amazon.com | Female
 4380702766 | Antonetta |            Bowler |          abowlerv@cmu.edu |   Male
 7858016997 |     Jarid |            McEniry |       jmceniry1d@angelfire.com |   Male
 3693967563 |      Raff |              Meah |      rmeah27@washingtonpost.com |   Male
 4113842388 |     Arron |           Dalziel |        adalziel2g@narod.ru | Female
 7341877243 |      Esme |       Seifenmacher |     eseifenmacher1z@free.fr | Female
 4640351089 |       Sax |         Stephenson |       sstephensonj@cnn.com | Female
 1952883946 |    Stormy |            Mathieu |       smathieu11@dell.com |   Male
 4650277515 |     Willy |           Geraldo |        wgeraldo2d@ox.ac.uk |   Male
 6310900986 |    Dahlia |            Greiser |         dgreiser1o@icio.us | Female
 9835876975 |   Joelynn |         De Gregoli |     jdegregoli1s@harvard.edu | Female
 2897073799 |      Riva |             Gaven |           rgaven9@live.com | Female
 6816494733 |    Maggee |          Shergold |        mshergold14@hud.gov | Female
 1805028979 |    Arleta |            Umbert |         aumbert13@lulu.com |   Male
 3808552263 |  Reinwald |           Raphael |       rraphaelr@jiathis.com |   Male
 3199681735 |    Jeanne |            Ciottoi |          jciottoi18@un.org | Female
 8640571546 |   Carmita |           Hiscoke |        chiscoke1v@ucsd.edu | Female
 2320648240 |    Jeanie |            Badman |          jbadmanu@toplist.cz |   Male
 5791637586 |     Locke |            Kordas |       lkordas7@aboutads.info | Female
 6456388384 |     Sunny |             Alvin |         salvins@hatena.ne.jp |   Male
 6154977174 |    Elnore |               Foy |          efoy19@smh.com.au |   Male
 2293547442 |    Manuel |          Gouldstone |       mgouldstonen@jimdo.com | Female
 7652775906 |     Cully |           Matyugin |        cmatyugin1y@epa.gov |   Male
```

```
cqlsh:proyecto> select count(*) from cuentahabiente;

 count
-------
    85

(1 rows)

Warnings :
Aggregation query used without partition key

cqlsh:proyecto>
```
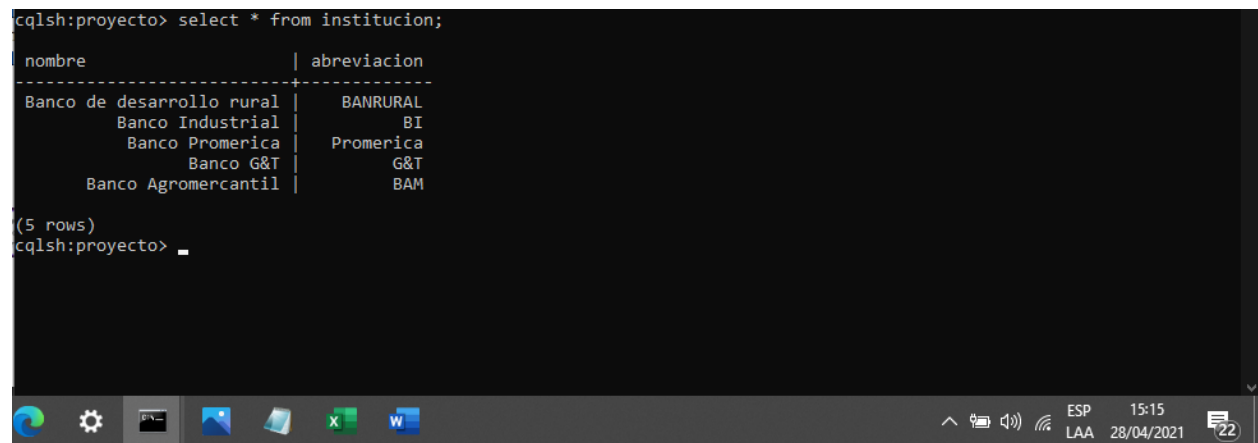
Juan Jose Lima Ramirez
201503738

Reporte instituciones bancarias

```
cqlsh:proyecto> select * from institucion;

 nombre                   | abreviacion
--------------------------+-------------
 Banco de desarrollo rural |    BANRURAL
         Banco Industrial |          BI
         Banco Promerica |   Promerica
               Banco G&T |         G&T
       Banco Agromercantil |         BAM

(5 rows)
cqlsh:proyecto>
```
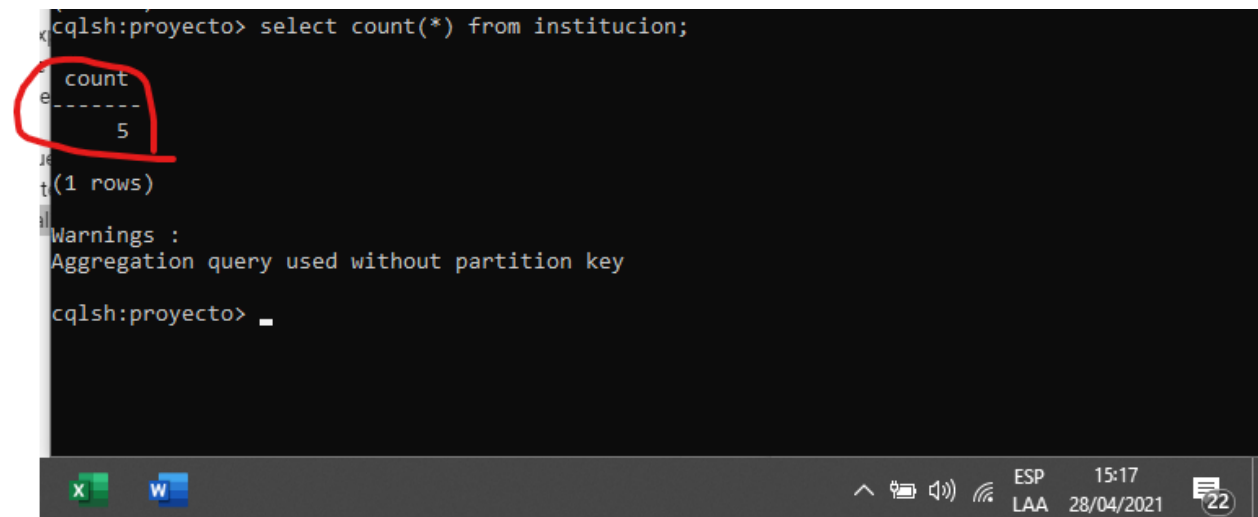
```
cqlsh:proyecto> select count(*) from institucion;

 count
-------
     5

(1 rows)

Warnings :
Aggregation query used without partition key

cqlsh:proyecto>
```

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201503738

Reporte de movimientos por cuentahabiente por mes.

```
cqlsh:proyecto> select cuiCliente, nombreCliente, tipoCuenta, monto,descripcion, fechaTransferencia fr
           ... where cuiCliente = 6816494733 and
           ... fechaTransferencia >= '2020-05-01' and fechaTransferencia <= '2020-05-31' allow filter

 cuicliente | nombrecliente | tipocuenta     | monto | descripcion | fechatransferencia
------------+---------------+----------------+-------+-------------+---------------------------------
 6816494733 |        Maggee | Monetaria en Q |   151 |     Credito | 2020-05-04 18:00:00.000000+0000
 6816494733 |        Maggee | Monetaria en Q |  5209 |     Credito | 2020-05-11 18:00:00.000000+0000
 6816494733 |        Maggee | Monetaria en Q |  5302 |     Credito | 2020-05-29 18:00:00.000000+0000

(3 rows)
cqlsh:proyecto>
```

```
cqlsh:proyecto> select count(*)
           ... from transaccion
           ... where cuiCliente = 6816494733 and
           ... fechaTransferencia >= '2020-05-01' and fechaTransferencia <= '2020-05-31'  allow filter

 count
-------
     3

(1 rows)
cqlsh:proyecto>
```