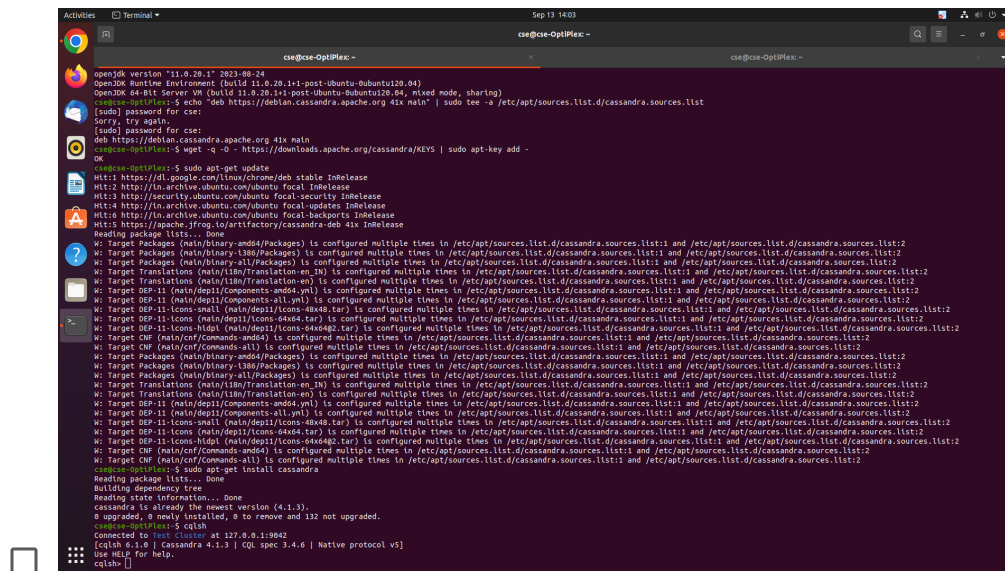


# IMPLEMENTATION:

## Installation:



```
cse@cse-OptiFlex:~$ openjdk version "11.0.20.1" 2023-08-24
OpenJDK Runtime Environment (build 11.0.20.1-post-ubuntu-bionic120.04)
OpenJDK 64-Bit Server VM (build 11.0.20.1-post-ubuntu-bionic120.04, mixed mode, sharing)
cse@cse-OptiFlex:~$ echo "deb https://deb.debian.cassandra.apache.org 41x main" | sudo tee -a /etc/apt/sources.list.d/cassandra.sources.list
[sudo] password for cse:
Sorry, try again.
[sudo] password for cse:
deb https://deb.debian.cassandra.apache.org 41x main
cse@cse-OptiFlex:~$ wget -q -O - https://downloads.apache.org/cassandra/KEYS | sudo apt-key add -
cse@cse-OptiFlex:~$ sudo apt-get update
Hit:1 https://dl.google.com/linux/chrome/deb stable InRelease
Hit:2 http://ftp.archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:4 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:5 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:6 https://apache.jfrog.io/artifactory/cassandra-deb 41x InRelease
Reading package lists... Done
W: Target Packages (main/binary-amd64/Packages) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Packages (main/binary-i386/Packages) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Packages (main/binary-all/Packages) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Translations (main/lin/translation-en-3N) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Translations (main/lin/translation-en) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 (main/dep11/components-amd64.yml) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 (main/dep11/components-all.yml) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 icons-small (main/dep11/icons-48x48.tar) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 icons (main/dep11/icons-64x64.tar) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 icons-hdmi (main/dep11/icons-64x642.tar) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target CNF (main/cnf/commands-amd64) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target CNF (main/cnf/commands-all) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Packages (main/binary-amd64/Packages) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Packages (main/binary-i386/Packages) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Packages (main/binary-all/Packages) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Translations (main/lin/translation-en-3N) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target Translations (main/lin/translation-en) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 (main/dep11/components-amd64.yml) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 (main/dep11/components-all.yml) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 icons-small (main/dep11/icons-48x48.tar) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 icons (main/dep11/icons-64x64.tar) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target DEP-11 icons-hdmi (main/dep11/icons-64x642.tar) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target CNF (main/cnf/commands-amd64) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
W: Target CNF (main/cnf/commands-all) is configured multiple times in /etc/apt/sources.list.d/cassandra.sources.list:1 and /etc/apt/sources.list.d/cassandra.sources.list:2
cse@cse-OptiFlex:~$ sudo apt-get install cassandra
Reading package lists... Done
Building dependency tree
Reading state information... Done
cassandra is already the newest version (4.1.3).
0 upgraded, 0 newly installed, 0 to remove and 132 not upgraded.
cqlsh
Connected to test cluster at 127.0.0.1:9042
[cqlsh 0.1.0 | Cassandra 4.1.3 | CQL spec 3.4.0 | Native protocol v5]
Use HELP for help.
cqlsh>
```

## Queries:

- 1.CREATE KEYSPACE football WITH replication = {'class': 'SimpleStrategy', 'replication\_factor': 1};
- 2.CREATE TYPE t\_won(tournament text, year int, position int);
- 3.CREATE TABLE newplayer(pid int, newplayerid int, name text, age int, country text, clubs list<text>, goals map<text, int>, position text, tournaments\_won list<frozen<t\_won>>, PRIMARY KEY(pid, newplayerid, name));
- 4.DESCRIBE TABLE football.newplayer ;
- 5.INSERT INTO newplayer (pid , newplayerid , name , age , country, goals , tournaments\_won , position ) VALUES ( 1, 7, 'Messi', 28, 'ARG', {'Total Goals' : 27}, [{tournament : 'EPL', year: 2012, position:2}, {tournament : 'EPL', year: 2014, position:4}, {tournament : 'BCPL', year: 2014, position:1}], 'Center Forward');
- 6.UPDATE newplayer SET clubs = clubs + ['Barcelona', 'MI'] WHERE pid = 1 and newplayerid = 1 and name = 'Messi';
- 7.DELETE from newplayer WHERE pid = 1 and newplayerid = 1 and name ='Messi';
- 8.BEGIN BATCH  
... INSERT INTO newplayer (pid , newplayerid , name , age , country, clubs , goals , tournaments\_won , position ) VALUES ( 1, 35, 'Ronaldo', 21, 'BRZ', ['Barcelona', 'MI'], {'Total Goals' : 21}, [{tournament : 'EPL', year: 2014, position:1}, {tournament : 'La Liga', year: 2015, position:2}], 'Center Mid');
- ... INSERT INTO newplayer (pid , newplayerid , name , age , country, clubs , goals , tournaments\_won , position ) VALUES ( 1, 222, 'Gayle', 28, 'BRZ', ['Barcelona', 'RPS'], {'Total Goals' : 27}, [{tournament : 'EPL', year: 2014, position:1}, {tournament : 'La Liga', year: 2015, position:2}], 'Center Forward');
- ... INSERT INTO newplayer (pid , newplayerid , name , age , country, clubs , goals , tournaments\_won , position ) VALUES ( 1, 45, 'Bravo', 26, 'BRZ', ['Barcelona', 'RPS'], {'Total Goals' : 16}, [{tournament : 'EPL', year: 2014, position:1}, {tournament : 'La Liga', year: 2015, position:2}], 'Defender');
- ... APPLY BATCH;

```

9.SELECT * FROM newplayer WHERE pid = 1;
10.select count(*) FROM newplayer where pid = 1,
11.select min(age) FROM newplayer where pid = 1;
12.select max(age) FROM newplayer where pid = 1;
13.select avg(age) FROM newplayer where pid = 1;
14.SELECT name, goals FROM newplayer;

```

## Screenshots:

```
Activities Terminal Sep 13 14:24 cse@cse-OptiPlex - cse@cse-OptiPlex - cse@cse-OptiPlex -

cse@cse-OptiPlex:~$ cqlsh
Connected to test cluster at 127.0.0.1:9042
[cqlsh 6.1.0 | Cassandra 3.11.3 | CQL spec 3.4.0 | Native protocol v5]
Use HELP for help.
cqlsh> CREATE KEYSPACE Football WITH replication = {'class': 'SimpleStrategy', 'replication_factor': 1};
AlreadyExistsException: keyspace 'Football' already exists
cqlsh> CREATE KEYSPACE Footballs WITH replication = {'class': 'SimpleStrategy', 'replication_factor': 1};
cqlsh> USE Footballs;
cqlsh> CREATE TYPE t_won(tournament text, year int, position int);
cqlsh> CREATE TABLE newplayer(pid int, newplayerid int, name text, age int, country text, clubs list<text>, goals map<text, int>, position text, tournaments_won list<frozen<t_won>>, PRIMARY KEY (pid, newplayerid, name));
cqlsh> DESCRIBE TABLE footballs.newplayer;

CREATE TABLE footballs.newplayer (
  pid int,
  newplayerid int,
  name text,
  age int,
  country text,
  position text,
  clubs list<text>,
  goals map<text, int>,
  tournaments_won list<frozen<t_won>>,
  PRIMARY KEY ((pid, newplayerid), name)
) WITH CLUSTERING ORDER BY (newplayerid ASC, name ASC)
AND additional_write_policy = '99p'
AND bloom_filter_chance = 0.01
AND caching = {'keys': 'ALL', 'rows_per_partition': 'NONE'}
AND cdc = false
AND comment = ''
AND compaction = {'class': 'org.apache.cassandra.db.compaction.SizeTieredCompactionStrategy', 'max_threshold': '32', 'min_threshold': '4'}
AND compression = {'chunk_length_in_kb': '16', 'class': 'org.apache.cassandra.io.compress.LZ4Compressor'}
AND mentable = 'default'
AND crc_check_chance = 1.0
AND default_time_to_live = 0
AND extensions = {}
AND gc_grace_seconds = 864000
AND max_index_interval = 2048
AND mentable_flush_period_in_ms = 0
AND nta_index_interval = 128
AND read_repair = 'BLOCKING'
AND speculative_retry = '99p';

cqlsh> Footballs> INSERT INTO newplayer (pid, newplayerid, name, age, country, goals, tournaments_won, position) VALUES (1, 7, 'Messi', 28, 'ARG', {'Total Goals': 27}, {[tournament : 'EL', year: 2012, position: 1], [tournament : 'UEFA', year: 2014, position: 1], [tournament : 'Copa Libertadores', year: 2015, position: 1]}}, 'Center Forward');
cqlsh> Footballs> UPDATE newplayer SET clubs = clubs + ['Barcelona', 'MI'] WHERE pid = 1 and newplayerid = 1 and name = 'Messi';
cqlsh> Footballs> UPDATE newplayer SET clubs = clubs + ['Barcelona', 'MI'] WHERE pid = 1 and newplayerid = 1 and name = 'Messi';
cqlsh> Footballs> SELECT * FROM newplayer;
```

The screenshot displays three terminal windows running SQL commands in a PostgreSQL environment. The top window shows a query to update player statistics based on tournament performance. The middle window lists players who have scored goals across various tournaments. The bottom window shows a more complex query involving multiple joins and filters to identify specific players like Rooney, Beckham, Henry, Frazer, Zidane, and Willamson. Each window includes headers for columns such as playerId, name, age, clubs, country, goals, position, and tournaments\_won.

```
cse@cse-OptiMXec - ssh  
mysql> UPDATE newplayer SET clubs = clubs + ('Barcelona','MI') WHERE pid = 1 and newplayerId = 1 and name = 'Messi';  
cqlsh:Footballs SELECT * FROM newplayer;  
  
pid | newplayerId | name | age | clubs | country | goals | position | tournaments_won  
-----+-----+----+---+-----+-----+-----+-----+-----  
1 | 7 | Messi | 28 | null | ARG | [Total Goals: 27] | Center Forward | [(tournament: 'EPL', year: 2012, position: 2), (tournament: 'EPL', year: 2014, position: 4), (tournament: 'BCLM', year: 2015, position: 1)]  
  
(2 rows)  
cqlsh:Footballs DELETE FROM newplayer WHERE pid = 1 and newplayerId = 1 and name = 'Messi';  
cqlsh:Footballs SELECT * FROM newplayer;  
  
pid | newplayerId | name | age | clubs | country | goals | position | tournaments_won  
-----+-----+----+---+-----+-----+-----+-----+-----  
1 | 7 | Messi | 28 | null | ARG | [Total Goals: 27] | Center Forward | [(tournament: 'EPL', year: 2012, position: 2), (tournament: 'EPL', year: 2014, position: 4), (tournament: 'BCLM', year: 2014, position: 1)]  
  
(1 rows)  
cqlsh:Footballs UPDATE newplayer SET tournaments_won = [(tournament: 'EPL', year: 2012, position: 2), (tournament: 'EPL', year: 2014, position: 4)] WHERE pid = 1 and newplayerId = 7 and name = 'Messi';  
cqlsh:Footballs BEGIN BATCH  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won) VALUES (1, 31, 'Ronaldinho', 21, 'BRZ', ['Barcelona', 'MI'], ['Total Goals: 21], [(tournament: 'EPL', year: 2012, position: 1), (tournament: 'La Liga', year: 2015, position: 1)], 'Center Mid');  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (1, 222, 'Gaye', 26, 'BRZ', ['Barcelona', 'RPS'], ['Total Goals: 27], [(tournament: 'EPL', year: 2014, position: 1), (tournament: 'La Liga', year: 2015, position: 2)], 'Center Forward'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (1, 45, 'Bravo', 26, 'BRZ', ['Barcelona', 'RPS'], ['Total Goals: 10], [(tournament: 'EPL', year: 2014, position: 1), (tournament: 'La Liga', year: 2015, position: 2)], 'Defender'];  
APPLY BATCH;  
cqlsh:Footballs BEGIN BATCH  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (1, 30, 'Rooney', 28, 'ENG', ['ManU', 'KXR'], ['Total Goals: 48], [(tournament: 'AFL', year: 2012, position: 1), (tournament: 'Bundesliga', year: 2015, position: 1)], 'Defender'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (1, 31, 'Beckhan', 33, 'ENG', ['ManU', 'KXR'], ['Total Goals: 50], [(tournament: 'AFL', year: 2012, position: 1), (tournament: 'Bundesliga', year: 2015, position: 1)], 'Defender'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (1, 32, 'Henry', 25, 'FRA', ['ManU', 'RCB'], ['Total Goals: 76], [(tournament: 'AFL', year: 2012, position: 1), (tournament: 'Bundesliga', year: 2015, position: 1)], 'Mid Fielder'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (1, 33, 'Zidane', 37, 'FRA', ['ManU', 'RCB'], ['Total Goals: 103], [(tournament: 'AFL', year: 2012, position: 1), (tournament: 'Bundesliga', year: 2015, position: 1)], 'Striker'];  
APPLY BATCH;  
cqlsh:Footballs BEGIN BATCH  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (2, 65, 'Ornath', 28, 'AUS', ['Chelsea', 'RCB'], ['Total Goals: 47], [(tournament: 'AFL', year: 2014, position: 1), (tournament: 'La Liga', year: 2015, position: 1)], 'Center Forward'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (2, 99, 'Orah', 21, 'ARG', ['Chelsea', 'RCB'], ['Total Goals: 47], [(tournament: 'AFL', year: 2014, position: 1), (tournament: 'La Liga', year: 2015, position: 1)], 'Mid Fielder'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (2, 48, 'McCullum', 23, 'ARG', ['Chelsea', 'KKIP'], ['Season Goals: 6], [(tournament: 'EPL', year: 2014, position: 1), (tournament: 'La Liga', year: 2015, position: 1)], 'Defender'];  
... INSERT INTO newplayer (pid, newplayerId, name, age, country, clubs, goals, tournaments_won, position) VALUES (2, 95, 'Williamson', 24, 'ARG', ['Chelsea', 'KKIP'], ['Season Goals: 17], [(tournament: 'EPL', year: 2014, position: 1), (tournament: 'La Liga', year: 2015, position: 1)], 'Striker');
```

```
Activities Terminal Sep 13 14:27
cse@cse-OptiPlex - cse@cse-OptiPlex - cse@cse-OptiPlex -
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 1, 45, 'Bravo', 26, 'BRZ', ['Barcelona', 'RPS'], ['Total Goals' : 1
0], [[tournament : 'EPL', year: 2014, position:1], [tournament : 'La Liga', year: 2015, position:2]], 'Defender');
-- APPLY BATCH;
cqlsh:footballs> BEGIN BATCH;
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 1, 30, 'Rooney', 28, 'ENG', ['ManU', 'KKR'], ['Total Goals' : 48],
[[tournament : 'APL', year: 2012, position:1], [tournament : 'Bundesliga', year: 2015, position:3]], 'Defender');
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 1, 31, 'Beckham', 33, 'ENG', ['ManU', 'KKR'], ['Total Goals' : 56],
[[tournament : 'APL', year: 2012, position:1], [tournament : 'Bundesliga', year: 2015, position:3]], 'Defender');
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 1, 32, 'Henry', 25, 'FRA', ['ManU', 'RCB'], ['Total Goals' : 70], [
tournament : 'APL', year: 2012, position:1], [tournament : 'Bundesliga', year: 2015, position:3]], 'Mid Field');
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 1, 33, 'Zidane', 37, 'FRA', ['ManU', 'RCB'], ['Total Goals' : 101], [
tournament : 'APL', year: 2012, position:1], [tournament : 'Bundesliga', year: 2015, position:3]], 'Striker');
-- APPLY BATCH;
cqlsh:footballs> BEGIN BATCH;
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 2, 65, 'Smith', 28, 'AUS', ['Chelsea', 'RCB'], ['Total Goals' : 47],
[[tournament : 'EPL', year: 2014, position:3], [tournament : 'La Liga', year: 2015, position:1]], 'Center Forward');
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 2, 99, 'Oran', 21, 'ARG', ['Chelsea', 'RCB'], ['Total Goals' : 67],
[[tournament : 'EPL', year: 2014, position:3], [tournament : 'La Liga', year: 2015, position:1]], 'Mid Field');
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 2, 40, 'McCullum', 23, 'ARG', ['Chelsea', 'KKIP'], ['Season Goals'
: 8], [[tournament : 'EPL', year: 2014, position:3], [tournament : 'La Liga', year: 2015, position:1]], 'Defender');
... INSERT INTO newplayer (pid, newplayerid, name, age, country, clubs, goals, tournaments_won, position) VALUES ( 2, 95, 'Williamson', 24, 'ARG', ['Chelsea', 'KKIP'], ['Season Goals
: 17], [[tournament : 'EPL', year: 2014, position:3], [tournament : 'La Liga', year: 2015, position:1]], 'Striker');
-- APPLY BATCH;
cqlsh:footballs> APPLY BATCH;
-- table alternative at input 'APPLY' ((APPLY)...)
cqlsh:footballs> SELECT * FROM newplayer;
...
cqlsh:footballs> SELECT * FROM newplayer;
pid | newplayerid | name | age | country | clubs | goals | position | tournaments_won
-----
1 | 7 | Messi | 28 | ARG | ['Total Goals': 27] | Center Forward | [[tournament : 'EPL', year: 2012, position: 2], [tournament : 'EPL', year: 2014, pos
ition: 3]]
1 | 30 | Rooney | 28 | ['ManU', 'KKR'] | ENG | ['Total Goals': 48] | Defender | [[tournament : 'APL', year: 2012, position: 1], [tournament : 'Bundesliga', year: 2015, pos
ition: 3]]
1 | 31 | Beckham | 33 | ['ManU', 'KKR'] | ENG | ['Total Goals': 56] | Defender | [[tournament : 'APL', year: 2012, position: 1], [tournament : 'Bundesliga', year: 2015, pos
ition: 3]]
1 | 32 | Henry | 25 | ['ManU', 'RCB'] | FRA | ['Total Goals': 70] | Mid Field | [[tournament : 'APL', year: 2012, position: 1], [tournament : 'Bundesliga', year: 2015, pos
ition: 3]]
1 | 33 | Zidane | 37 | ['ManU', 'RCB'] | FRA | ['Total Goals': 101] | Striker | [[tournament : 'APL', year: 2012, position: 1], [tournament : 'Bundesliga', year: 2015, pos
ition: 3]]
1 | 35 | Ronaldinho | 21 | ['Barcelona', 'MS'] | BRZ | ['Total Goals': 23] | Center Mid | [[tournament : 'EPL', year: 2014, position: 1], [tournament : 'La Liga', year: 2015, pos
ition: 3]]
1 | 45 | Bravo | 26 | ['Barcelona', 'RPS'] | BRZ | ['Total Goals': 16] | Defender | [[tournament : 'EPL', year: 2014, position: 1], [tournament : 'La Liga', year: 2015, pos
ition: 3]]
1 | 222 | Gayle | 28 | ['Barcelona', 'RPS'] | BRZ | ['Total Goals': 27] | Center Forward | [[tournament : 'EPL', year: 2014, position: 1], [tournament : 'La Liga', year: 2015, pos
ition: 3]]
(8 rows)
cqlsh:footballs>
```

```
Activities Terminal Sep 13 14:42
cse@cse-OptiPlex - cse@cse-OptiPlex - cse@cse-OptiPlex -
(1 rows)
cqlsh:footballs> select max(age) FROM newplayer where pid = 1;
system.max(age)
-----
37

(1 rows)
cqlsh:footballs> select avg(age) FROM newplayer where pid = 1;
system.avg(age)
-----
28

(1 rows)
cqlsh:footballs> SELECT count(*), avg(age) as Manchester_United_average_age FROM newplayer WHERE clubs CONTAINS 'ManU';
InvalidRequest [Error from server: code=2208 [invalid query] message="cannot execute this query as it might involve data filtering and thus may have unpredictable performance. If you want to execute this
query please use the performance_unpredictable flag." see ALLOW_FILTERING]
cqlsh:footballs> SELECT newplayerid,name FROM newplayer where pid =2;
newplayerid | name
-----
7 | Messi
30 | Rooney
31 | Beckham
32 | Henry
33 | Zidane
35 | Ronaldinho
45 | Bravo
222 | Gayle
(8 rows)
cqlsh:footballs> SELECT newplayerid,name FROM newplayer where pid =1;
newplayerid | name
-----
7 | Messi
30 | Rooney
31 | Beckham
32 | Henry
33 | Zidane
35 | Ronaldinho
45 | Bravo
222 | Gayle
(8 rows)
cqlsh:footballs> SELECT name,goals FROM newplayer;
name | goals
-----
Messi | ['Total Goals': 27]
Rooney | ['Total Goals': 48]
Beckham | ['Total Goals': 56]
Henry | ['Total Goals': 70]
Zidane | ['Total Goals': 101]
Ronaldinho | ['Total Goals': 23]
Bravo | ['Total Goals': 16]
Gayle | ['Total Goals': 27]
(8 rows)
cqlsh:footballs>
```

```
cqlsh:footballs>
cqlsh:footballs> select count(*) FROM newplayer where pid = 1;
count
-----
8

(1 rows)
cqlsh:footballs> select name, country, clubs, ageanalyzer(age) as Age Analysis FROM newplayer WHERE pid = 1;
InvalidRequest [Error from server: code=2208 [invalid query] message="Unknown function 'ageanalyzer'"]
cqlsh:footballs> select min(age) FROM newplayer where pid = 1;
system.min(age)
-----
21

(1 rows)
cqlsh:footballs> select max(age) FROM newplayer where pid = 1;
system.max(age)
-----
37

(1 rows)
cqlsh:footballs> select avg(age) FROM newplayer where pid = 1;
system.avg(age)
-----
28

(1 rows)
```