ANDILE NOMAQHIZA E-COMMERCE CASSANDRA PROJECT

1.)
 CREATE KEYSPACE EcommerceCatalog
 with replication = {'class' : 'SimpleStrategy', 'replication_factor' : 1};

2.) use EcommerceCatalog;

```
root@ed53f8222586: /
                                                                                                                                                 ₽
Microsoft Windows [Version 10.0.22635.5235]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Andile>docker ps
CONTAINER ID IMAGE
                                                       NAMES
ed53f8222586 cassandra:latest "docker-entrypoint.s..."
                                                                  2 weeks ago
                                                                                  Up 40 minutes
                                                                                                    0.0.0.0:7000-7001->7000-7001/tcp, 0.0.0.0:90
42->9042/tcp, 0.0.0.0:9160->9160/tcp, 7199/tcp
                                                      cassandra
C:\Users\Andile>docker exec -it ed53f8222586 bash
root@ed53f8222586:/# cqlsh
Connected to Test Cluster at 127.0.0.1:9042
[cqlsh 6.2.0 | Cassandra 5.0.4 | CQL spec 3.4.7 | Native protocol v5]
Use HELP for help.
cqlsh>
cqlsh> CREATE KEYSPACE EcommerceCatalog
    ... with replication = {'class' : 'SimpleStrategy', 'replication_factor' : 1};
cqlsh> use EcommerceCatalog;
cqlsh:ecommercecatalog>
```

3.)
create table categories(
category_id UUID primary key,
category_name text,
description text);
select*from categories;

```
4.)
     create table brands(
     brand_id UUID primary key,
     brand_name text,
     country_of_origin text
     select*from brands;
cglsh:ecommercecatalog>
cqlsh:ecommercecatalog> create table brands(
                       ... brand_id UUID primary key,
                       ... brand_name text,
                       ... country_of_origin text
                       ...);
cqlsh:ecommercecatalog> select*from brands;
 brand_id brand_name country_of_origin
(0 rows)
cqlsh:ecommercecatalog>
  5.)
     create table products(
     product_id UUID primary key,
     product_name text,
     category_id UUID,
     brand id UUID,
     price decimal,
     inventory_count int,
     description text
     );
     select*from products;
cqlsh:ecommercecatalog>
cqlsh:ecommercecatalog> create table products(
                  ... product_id UUID primary key,
                  ... product_name text,
                  ... category_id UUID,
                  ... brand_id UUID,
                  ... price decimal,
```

6.) insert into categories(category_id, category_name, description)

```
values
(UUID(), 'Electronics', 'Electronic devices');
insert into categories(category_id, category_name, description)
values
(UUID(), 'Computers', 'Laptops and desktops');
insert into categories(category_id, category_name, description)
values
(UUID(), 'Smartphones', 'Mobile phones');
insert into categories(category_id, category_name, description)
values
(UUID(), 'Clothing', 'Apparel');
insert into categories(category_id, category_name, description)
values
(UUID(), 'Menswear', 'Clothing for men');
insert into categories(category_id, category_name, description)
values
(UUID(), 'Womenswear', 'Clothing for women');
select*from categories;
```

```
cqlsh:ecommercecatalog> select*from categories;
category_id
                                       category_name | description
34db4421-9c3e-41ac-8f12-c6d64fbfd5f4
                                            Computers
                                                        Laptops and desktops
c712a08f-c43b-4dd3-b687-5f4c3296b55f
                                          Electronics
                                                           Electronic devices
7eb32df4-1fc8-453d-a669-4c7a7370b5a7
                                             Clothing
                                                                      Apparel
e530b1c1-1d75-446c-a0bd-8885a77d0f6f
                                                            Clothing for men
                                             Menswear
145ecccb-0c63-4bba-9240-a1cdf9d3c7c8
                                          Smartphones
                                                               Mobile phones
faa4cc91-f76d-4c1e-b19f-959967dc3f8b
                                           Womenswear
                                                           Clothing for women
(6 rows)
cqlsh:ecommercecatalog>
```

```
insert into brands(brand_id, brand_name, country_of_origin)values(UUID(), 'TechCorp', 'USA');insert into brands(brand_id, brand_name, country_of_origin)
```

```
values
(UUID(), 'StyleGen', 'Italy');
insert into brands(brand_id, brand_name, country_of_origin)
values
(UUID(), 'MobilePro', 'China');
insert into brands(brand_id, brand_name, country_of_origin)
values
(UUID(), 'FashionFit', 'UK');
insert into brands(brand_id, brand_name, country_of_origin)
values
(UUID(), 'ElectroMax', 'Japan');
insert into brands(brand_id, brand_name, country_of_origin)
values
(UUID(), 'HomeStyle', 'Canada');
select*from brands;
```

cqlsh:ecommercecatalog> select*from brands;				
brand_id	brand_name	country_of_origin		
24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 0bb4f8b0-a9ef-4ff5-95bb-dfd65f35f246 bdb49145-da00-45d6-96c7-494d8ec99fa1 75c007e4-abf5-4dab-9526-991106890ab3 949b4595-1a80-4a51-b8b5-296e32a8fe02 11567e38-d8ef-41b5-8c77-eceaa0ba8e7b	TechCorp HomeStyle MobilePro ElectroMax FashionFit StyleGen	USA Canada China Japan UK Italy		
(6 rows) cqlsh:ecommercecatalog>				

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)
 values
 (UUID(), 'Laptop X100', 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4, 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71, 1200.00, 50, 'High-performance laptop');

```
insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)
values
(UUID(), 'Smartphone Z5', 145ecccb-0c63-4bba-9240-a1cdf9d3c7c8, bdb49145-da00-45d6-96c7-
494d8ec99fa1, 800.00, 100, 'Latest smartphone');
insert into products (product id, product name, category id, brand id, price, inventory count, description)
values
(UUID(), 'Mens Shirt', e530b1c1-1d75-446c-a0bd-8885a77d0f6f, 11567e38-d8ef-41b5-8c77-
eceaa0ba8e7b, 50.00, 150, 'Classic shirt');
insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)
values
(UUID(), 'Womens Dress', e530b1c1-1d75-446c-a0bd-8885a77d0f6f, 949b4595-1a80-4a51-b8b5-
296e32a8fe02, 120.00, 110, 'Elegant dress');
insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)
values
(UUID(), 'Desktop Pro 2000', 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4, 75c007e4-abf5-4dab-9526-
991106890ab3, 1500.00, 30, 'Powerful desktop');
insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)
values
(UUID(), 'Smartphone Lite', 145ecccb-0c63-4bba-9240-a1cdf9d3c7c8, bdb49145-da00-45d6-96c7-
494d8ec99fa1, 300.00, 200, 'Budget phone');
insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)
values
(UUID(), 'Mens Pants', e530b1c1-1d75-446c-a0bd-8885a77d0f6f, 949b4595-1a80-4a51-b8b5-
296e32a8fe02, 75.00, 120, 'Comfortable pants');
```

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)

```
(UUID(), 'Womens Blouse', faa4cc91-f76d-4c1e-b19f-959967dc3f8b , 11567e38-d8ef-41b5-8c77-eceaa0ba8e7b, 80.00, 130, 'Stylish blouse');
```

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Laptop Mini', 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4 , 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 , 700.00, 80, 'Portable laptop');

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Smartphone Pro', 145ecccb-0c63-4bba-9240-a1cdf9d3c7c8, 75c007e4-abf5-4dab-9526-991106890ab3, 1100.00, 60, 'Professional phone');

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Mens Jacket', e530b1c1-1d75-446c-a0bd-8885a77d0f6f, 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71, 150.00, 90, 'Warm jacket');

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Womens Skirt', faa4cc91-f76d-4c1e-b19f-959967dc3f8b , 949b4595-1a80-4a51-b8b5-296e32a8fe02, 60.00, 190, 'Casual skirt');

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Tablet Pro', 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4, 75c007e4-abf5-4dab-9526-991106890ab3, 900.00, 70, 'Professional tablet');

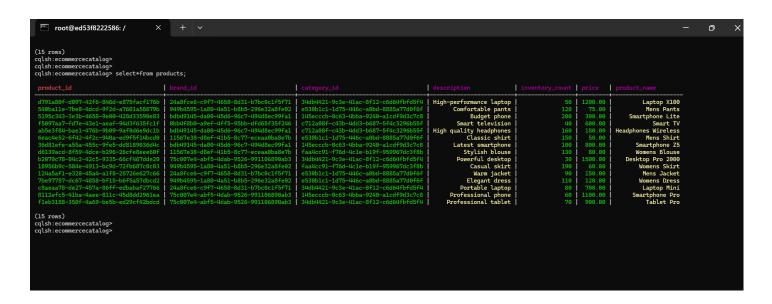
insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Headphones Wireless', c712a08f-c43b-4dd3-b687-5f4c3296b55f, bdb49145-da00-45d6-96c7-494d8ec99fa1, 180.00, 160, 'High quality headphones');

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

(UUID(), 'Smart TV', c712a08f-c43b-4dd3-b687-5f4c3296b55f, 0bb4f8b0-a9ef-4ff5-95bb-dfd65f35f246 , 600.00, 40, 'Smart television');

select*from products



9.)

BEGIN BATCH

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description) values

 $(UUID(), 'Sport\ T-Shirt',\ e530b1c1-1d75-446c-a0bd-8885a77d0f6f\ ,\ 949b4595-1a80-4a51-b8b-1a80-4a51-b8b-1a$

296e32a8fe02, 40.00, 250, 'Sporty t-shirt');

insert into products(product_id, product_name, category_id, brand_id, price, inventory_count, description)

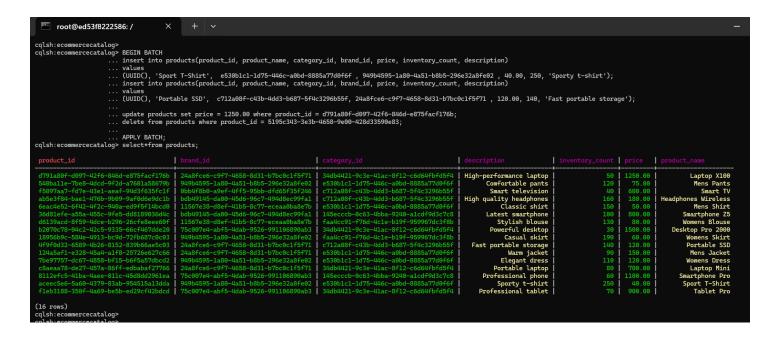
values

(UUID(), 'Portable SSD', c712a08f-c43b-4dd3-b687-5f4c3296b55f, 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71, 120.00, 140, 'Fast portable storage');

update products set price = 1250.00 where product_id = d791a80f-d097-42f6-846d-e875facf176b;

delete from products where product_id = 5195c343-3e3b-4658-9e00-428d33590e83;

APPLY BATCH;



10.)

update products set product_name = 'Premium classic shirt' where product_id = 6eac4e52-6f42-4f2c-940a-ed9f5f14bcd0;

11.)

delete from brands where brand_id = 0bb4f8b0-a9ef-4ff5-95bb-dfd65f35f246;

12.)

CREATE INDEX ON products (category_id);

13.)

select*from products where price>500.00 allow filtering;

product_id	brand_id	category_id	description		price	product_name
	24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71	34db4421-9c3e-41ac-8f12-c6d64fbfd5f4	High-performance laptop	50	1250.00	Laptop X100
	0bb4f8b0-a9ef-4ff5-95bb-dfd65f35f246			40	600.00	Smart TV
	bdb49145-da00-45d6-96c7-494d8ec99fa1			100	800.00	Smartphone Z5
	75c007e4-abf5-4dab-9526-991106890ab3			30	1500.00	Desktop Pro 2000
	24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71				700.00	Laptop Mini
	75c007e4-abf5-4dab-9526-991106890ab3			60	1100.00	Smartphone Pro
1eb3188-350f-4a69-be5b-ed29cf42bdcd	75c007e4-abf5-4dab-9526-991106890ab3	34db4421-9c3e-41ac-8f12-c6d64fbfd5f4	Professional tablet	70	900.00	Tablet Pro

select*from products where brand_id = 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 allow filtering;

```
cqlsh:ecommercecatalog> select*from products where brand_id = 244a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 allow filtering;

product_id | brand_id | category_id | description | inventory_count | price | product_name |

d791a80f-d997-42f6-846d-e875facf176b | 244a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 | 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4 | High-performance laptop | 50 | 1250.00 | Laptop X100 |

449f6d32-6589-4b26-8152-839b66ae5c03 | 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 | c712a96f-c495b-4d3-b687-5f4c3296b55f | Fast portable storage | 140 | 120.00 | Portable SSD |

124a5af1-e2328-485at-41f8-25756e527666 | 24a8fce6-c9f7-4658-8d31-b7bc0c1f5f71 | d34db4421-9c3e-41ac-8f12-c6d64fbfd5f4 | Portable laptop | 80 | 700.00 | Laptop Mini |

(4 rows) | cqlsh:ecommercecatalog>
```

15.)

select avg(price) as AveragePriceSmartPhone from products where category_id = 145ecccb-0c63-4bba-9240-a1cdf9d3c7c8 allow filtering;

```
cqlsh:ecommercecatalog>
cqlsh:ecommercecatalog> select avg(price) as AveragePriceSmartPhone from products where category_id = 145ecccb-0c63-4bba-9240-alcdf9d3c7c8 allow filtering;

averagepricesmartphone

950.00

(1 rows)

Warnings :
Aggregation query used without partition key

cqlsh:ecommercecatalog>
```

16.)

select min(inventory_count) as Minimum_Inventory_Count from products;

17.)

select max(inventory_count) as Minimum_Inventory_Count from products;

18.)

select count(*) as TotalProducts_ComputerCategory from products where category_id = 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4;

```
cqlsh:ecommercecatalog>
cqlsh:ecommercecatalog>
cqlsh:ecommercecatalog> select count(*) as TotalProducts_ComputerCategory from products where category_id = 34db4421-9c3e-41ac-8f12-c6d64fbfd5f4;

totalproducts_computercategory

(1 rows)

Warnings :
Aggregation query used without partition key

cqlsh:ecommercecatalog>
```

19.)

select count(*) as TotalBrands_Japan from products where brand_id = 75c007e4-abf5-4dab-9526-991106890ab3 allow filtering;