

EPAM University Programs

DevOps L1 course

Database Administration

TASK DB1

PART 1

Creation database `shop` with tables `customers`, `products`, `delivery`

```
mysql> SHOW TABLES;
+-----+
| Tables_in_shop |
+-----+
| customers      |
| delivery       |
| products       |
+-----+
```

Filling in the tables and outputting content in different ways

```
mysql> INSERT INTO customers (name)
→ VALUES ('Bob');
Query OK, 1 row affected (0.00 sec)
```

- example of filling content in table

SELECT operator with *, WHERE, GROUP BY and ORDER BY

```
mysql> SELECT * FROM products;
+----+-----+-----+
| id | cost | name_product |
+----+-----+-----+
| 1  | 10   | apple        |
| 2  | 15   | orange       |
| 3  | 20   | carrot       |
| 4  | 20   | potato       |
+----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM products WHERE cost=15;
+----+-----+-----+
| id | cost | name_product |
+----+-----+-----+
| 2  | 15   | orange       |
+----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT COUNT(name_product), cost FROM products GROUP BY cost;
+-----+-----+
| COUNT(name_product) | cost |
+-----+-----+
| 1                   | 10   |
| 1                   | 15   |
| 2                   | 20   |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM products ORDER BY name_product;
+----+-----+-----+
| id | cost | name_product |
+----+-----+-----+
| 1  | 10   | apple        |
| 3  | 20   | carrot       |
| 2  | 15   | orange       |
| 4  | 20   | potato       |
+----+-----+-----+
4 rows in set (0.00 sec)
```

DDL, DML, DCL

DDL

```
mysql> DROP TABLE products;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> CREATE TABLE products (
  → id NOT NU
NULL      NULLIF      NUMERIC      NUMGEOMETRIES      NUMINTERIORRINGS      NUMPOINTS
  → id INT NOT NULL AUTO_INCREMENT,
  → name_product VARCHAR(20) NOT NULL,
  → cost INT NOT NULL,
  → PRIMARY KEY (id)
  → );
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> ALTER TABLE products MODIFY name_product VARCHAR(30) NOT NULL;
Query OK, 0 rows affected (0.00 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

DML

```
mysql> INSERT INTO products (name_product, cost) VALUES ("plum", 20);
Query OK, 1 row affected (0.00 sec)
```

```
mysql> DELETE FROM products WHERE cost=20;
Query OK, 1 row affected (0.00 sec)
```

DCL

```
mysql> CREATE USER 'bim2'@'localhost' IDENTIFIED BY 'root';
Query OK, 0 rows affected (0.04 sec)

mysql> GRANT ALL PRIVILEGES ON *.* TO 'bim2'@'localhost' WITH GRANT OPTION;
Query OK, 0 rows affected (0.01 sec)
```

Create a database of new users with different privileges. Connect to the database as a new user and verify that the privileges allow or deny certain actions.

```
mysql> DROP USER 'bim2'@'localhost';
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> GRANT SELECT ON shop.* TO 'bim2'@'localhost';
Query OK, 0 rows affected (0.00 sec)
```

From bim

```
mysql> INSERT INTO customers (name) VALUE ('Bob2');
Query OK, 1 row affected (0.03 sec)
```

From bim2

```
mysql> INSERT INTO customers (name) VALUE (Bob2);
ERROR 1142 (42000): INSERT command denied to user 'bim2'@'localhost' for table 'customers'
```

```
mysql> SELECT * FROM customers;
+----+-----+
| id | name |
+----+-----+
|  1 | Bob  |
|  2 | Bob2 |
+----+-----+
2 rows in set (0.00 sec)
```

PART 2

backup db `shop`

```
root@bimserver:~# mysqldump -u bim -p shop > bk_shop.sql
```

drop table

```
mysql> drop table customers;
Query OK, 0 rows affected (0.03 sec)

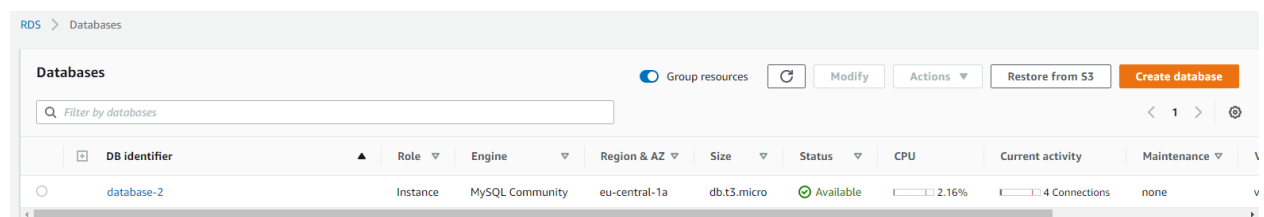
mysql> show tables;
+-----+
| Tables_in_shop |
+-----+
| delivery       |
| products       |
+-----+
2 rows in set (0.00 sec)
```

restoring db `shop`

```
root@bimserver:~# mysql -u bim -p shop < bk_shop.sql
Enter password:
```

```
mysql> show tables;
+-----+
| Tables_in_shop |
+-----+
| customers       |
| delivery        |
| products        |
+-----+
3 rows in set (0.00 sec)
```

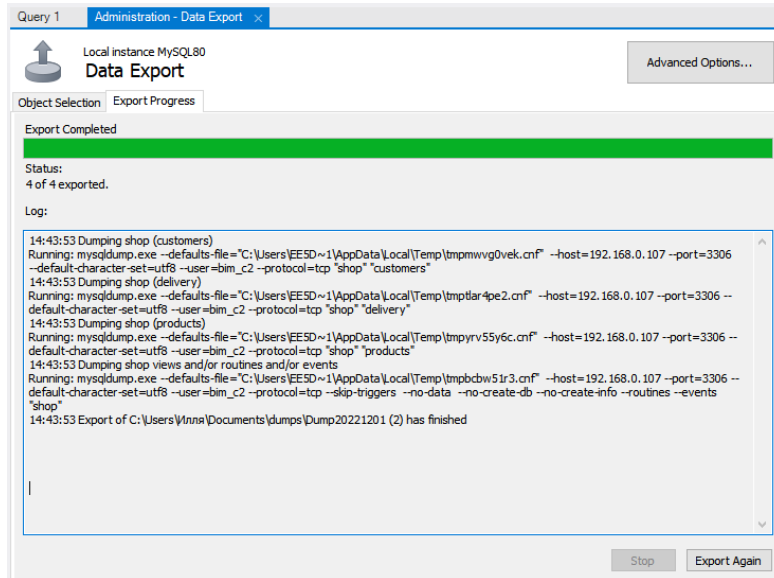
aws rds create db



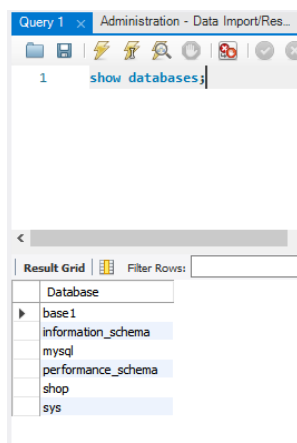
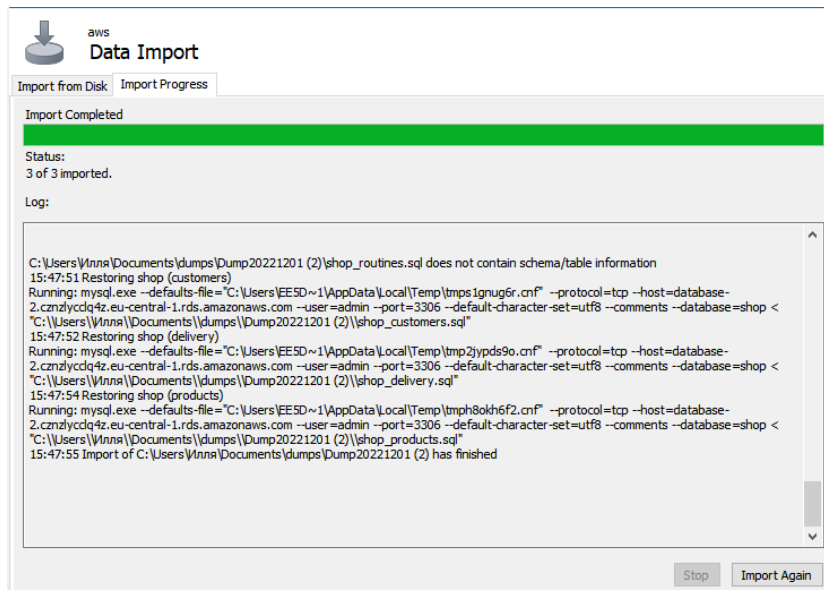
The screenshot shows the AWS RDS console 'Databases' page. At the top, there are buttons for 'Group resources', 'Modify', 'Actions', 'Restore from S3', and 'Create database'. Below these is a search bar labeled 'Filter by databases'. A table lists the databases with columns: DB identifier, Role, Engine, Region & AZ, Size, Status, CPU, Current activity, and Maintenance. One database is listed: 'database-2' with role 'Instance', engine 'MySQL Community', region 'eu-central-1a', size 'db.t3.micro', status 'Available', CPU '2.16%', and '4 Connections'.

DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Current activity	Maintenance
database-2	Instance	MySQL Community	eu-central-1a	db.t3.micro	Available	2.16%	4 Connections	none

export local db `shop`



import to aws db `shop`



check importation our db `shop`

Part 3

create db and collection in mongodb

```
> use people_db;  
switched to db people_db
```

```
> db.createCollection("users");  
{ "ok" : 1 }
```

```
> show dbs;  
admin      0.000GB  
config     0.000GB  
local      0.000GB  
people_db  0.000GB
```

```
> show collections;  
users
```

inserting some information and outputting it

```
> db.users.insert({"name" : "Illia"});  
WriteResult({ "nInserted" : 1 })  
> db.users.insert({"name" : "Ivan"});  
WriteResult({ "nInserted" : 1 })  
> db.users.find();  
{ "_id" : ObjectId("6388c77e5ea39e03d4ff4a97"), "name" : "Illia" }  
{ "_id" : ObjectId("6388c7935ea39e03d4ff4a98"), "name" : "Ivan" }  
>
```