Report: Database and Table Creation

---Question 1

In this report, we will detail the creation of a PostgreSQL database and two tables, as well as the insertion of data into these tables.

1. Table Creation:

```
DROP TABLE IF EXISTS world;

CREATE TABLE

IF NOT EXISTS world (name VARCHAR,

                    continent VARCHAR, area BIGINT,

                    population BIGINT, gdp BIGINT);

ALTER TABLE world

ADD CONSTRAINT PK_world PRIMARY KEY (name);
```

We create a table named "world" with columns for country name, continent, area, population, and GDP, using "name" as the primary key.

2. Data Insertion:

```
INSERT INTO world

VALUES

  ('Afghanistan', 'Asia', 652230, 25500100, 20343000000),

  ('Albania', 'Europe', 28748, 2831741, 12960000000),

  ('Algeria', 'Africa', 2381741, 37100000, 188681000000),

  ('Andorra', 'Europe', 468, 78115, 3712000000),

  ('Angola', 'Africa', 1246700, 20609294, 100990000000);
```

We insert data for five countries into the "world" table.

Below the code to show the table.

```
SELECT *

FROM world;
```

Output:

	name [PK] character varying	continent character varying	area bigint	population bigint	gdp bigint
1	Afghanistan	Asia	652230	25500100	20343000000
2	Albania	Europe	28748	2831741	12960000000
3	Algeria	Africa	2381741	37100000	188681000000
4	Andorra	Europe	468	78115	3712000000
5	Angola	Africa	1246700	20609294	100990000000

3. Data Query:

```
SELECT name, population, area

FROM world

WHERE area > 3000000

OR population > 25000000;
```

This query retrieves data from the "world" table for countries with an area greater than or equal to 3,000,000 or a population greater than or equal to 25,000,000.

Output:

	name [PK] character varying	population bigint	area bigint
1	Afghanistan	25500100	652230
2	Algeria	37100000	2381741

The output of this query is a list of countries meeting the specified criteria.

---Question 2

1. Enum Creation and Table:

```
DROP TABLE IF EXISTS products;

CREATE TYPE fats AS ENUM('Y', 'N');

CREATE TYPE rec AS ENUM('Y', 'N');

CREATE TABLE

IF NOT EXISTS products (

   product_id int,

   low_fats fats,

   recyclable rec);
```

ALTER TABLE products

ADD CONSTRAINT PK_products PRIMARY KEY (product_id);

We create two enumeration types, "fats" and "rec," and a new table named "products" with columns for product ID, low fats, and recyclable attributes.

2. Data Insertion:

INSERT INTO products(product_id, low_fats, recyclable)

VALUES

(0, 'Y', 'N'),

(1, 'Y', 'Y'),

(2, 'N', 'Y'),

(3, 'Y', 'Y'),

(4, 'N', 'N');

We insert data into the "products" table.

3. Data Query:

SELECT product_id

FROM products

WHERE low_fats = 'Y'

AND recyclable = 'Y';

This query retrieves product IDs for items with low fats and recyclable attributes set to 'Y'.

Output:

	product_id [PK] integer
1	1
2	3