**Scenario**

You are working for TerpBuy, a global business-to-consumer and business-to-business platform. It is based in and operates out of College Park, Maryland, USA, and has a distribution facility in Mumbai, India. The company is looking for insights on different aspects of its customers, products, departments, and orders. To help the company, you will have to export data from its data warehouse.

**Project Tasks**

**Part I: SQL Queries**

For each of the queries below, write only one query that answers the question. Your query results must clearly provide the answer. All query results must show text values rather than identifiers. For example, when showing a department in the results, it should show 'Fitness' instead of its corresponding ID value, 2:

1. How many rows of data are stored for each table in the database? List the name of each table followed by the number of rows it has.
2. Which products are considered high-priced products? A high-priced product has a price exceeding $100.00. List the names and prices of the high-priced products.
3. List all orders placed by customers in the state of Florida. Note: The state abbreviation for Florida is 'FL'. Include the customers’ first names, last names, city, and segment, along with the order ID and order date.
4. List all products that fall in one of the following categories: 'Computers', 'Toys', 'Tennis  & Racquet'. Include the products’ names, category, department, and price.
5. TerpBuy is considering reducing its product offerings. Which products have not yet been sold? Include the name, category, and department for each such product.
6. List the names of all cities from where orders are shipped. Also, for such cities, find the number of orders for which shipping was delayed. Sort the list of cities in order from the highest to the least number of shipping orders.
7. How many customers are there in each segment? Show the most popular segment at the top of the result. Incorporate a column alias in the result.
8. How many orders were placed in the first quarter of 2021? Note: A quarter consists of three months. Incorporate a column alias in the result. You can refer to the documentation on date functions provided [here](https://dev.mysql.com/doc/refman/8.0/en/date-and-time-functions.html).
9. List in alphabetical order all states supporting multiple customer segments.
10. To help the commercial sales department with its marketing, find all customers in the corporate segment who have not placed any orders. Include each customers’ first name, last name, street, city, state, and zip code. Sort the results by the last name first and then by the first name.
11. There has been a recall of the product Nike Mens Free 5.0+ Running Shoe. TerpBuy would have to offer a discount coupon to all customers who purchased this product. Find all orders that included this product as a part of the purchase. For all such orders, list the customers’ first names, last names, street, state, zip code, and order date. Each customer can be offered only one discount coupon. Hence, do not list the same customer more than once.
12. Premium customers are those customers who have placed orders with order amounts greater than the average order amount. For each customer, find the first and last names, and the order amount for all orders that exceeded the average order amount.

For each query, include the following items in your document:

1. The corresponding question number
2. The query
3. A legible screenshot of the query text and the executed results showing at least the first 10 rows. The screenshot must show your name and date included as a code comment. If your screenshot is not legible, you will not be awarded any points. You can visit [this](https://www.take-a-screenshot.org/) website for help with taking screenshots.

**Part II: Connecting Python to SQL**

All tasks below must be performed in the Jupyter Notebook:

1. Write a query to show the quantity of items sold by each department. Sort the results by department name.
2. Using the query you wrote in Question 1, create a data visualization (e.g., a bar chart) showing all departments and the number of items each of them sold. Using a markdown cell, explain what you observe from the analysis.
3. Write a query to show the number of orders placed in each year in which at least one order was placed. Hint: Search online to learn about MySQL’s YEAR() function to query data.
4. Using the query you wrote in Question 3, create a data visualization (e.g., a line graph) showing all years and the number of orders placed during each year, to see if there is a trend in ordering. Using a markdown cell, explain what you observe from the analysis.

**Part III: Executive Summary**

Based on the data analysis that you performed in the previous parts, write an executive summary highlighting what you believe are the key insights or recommendations that the company should take away from the analysis. The summary must be 200–300 words long.