**Final SQL Project: Innovation Generation LLC**

Innovation generation is an Ice Cream Shop Company, Inc., licensed to sell ice cream and related products. The name Innovation generation is derived from the desire of the Company to stay up to date with the public’s needs in providing products to meet their needs. The Company manufactures a large and growing volume of Ice cream products which it distributes through various channels. The ice cream is sold for both Ice cream franchised and public members. The Company has its corporate office in London with principal offices worldwide. The Company will service its products online and in person; customers can place more than one product and choose a pickup/delivery option. Customers can only place a delivery order to the cities where they are located, and the employers will only accept orders if the customer resides in the same city as the store. This is to limit the travel time for the product and preservation of such product. The business will like you to generate datasets based on the question listed below.

Business question 1:

As a manager for the reporting team, I want a dataset generated that will return all the customers who placed an order and made payments using cash as their payment type. This effort is for us to make a budget for how we process electronic payments.

Business question 2:

As a manager for the reporting team, I am preparing for the annual customer reports

 that I must submit to the upper management; I would like you to write a SQL query to get me the customer's full name, phone numbers, email address, address (address line 1, city name, population of that city, and the country name of that address)

Business question 3:

The director of data services will like you to create a View containing data for ingredient names, recipe quantity, product names, and product descriptions.

Business question 4:

The director is incredibly pleased with the view you created in question 3. Still, after two weeks of using it, the director is asking for additional information to be added to the view. The directory would like you to add a column called "Shot Description" this column should contain only the first work of the product description. This information is needed because he wants to use it to make a quick analysis and to use something other than the actual product description. For example, if the product description is "Bacon ice cream," he wants to see "Bacon" for the "Shot Description" column.

Business question 5:

As a manager of the production department, I want to get the list of products that we have discontinued.

Business question 6:

Thank you for the report on question 5. I will like you to add some information to that report, please. I would like you to add the name of the department that discontinued the products; this is needed for audit purposes.

Business question 7:

The sales manager would like you to write a query to return all the employees who helped place orders after 2018.

Business question 8:

A report from upper management regarding a customer complaint says there was short inventory when they tried to place an order. The manager will like you to build a report that will check for products and their inventory items. They require you to create datasets containing inventory Quantity, Barcode, product name, and unit price.

Business question 9:

Using the report from question 8. Please add a derived column called "Quantity check." This column should hold the following information. If the quantity is less than 10, display "Red zone"; if the amount is greater or equal to 10 but less than 16, display "Yellow zone." If the quantity is greater than 16, then display "Green Zone."

Business question 10:

Management just noticed that the report on question 9 is blowing up due to unknown values. They would like you to replace all the Unknown Barcodes with the reading "No Barcode."

Business question 11:

The HR department would like you to compile a list of employees with their addresses, cities, provinces, and countries. An employee audit is coming, and the HR department wants to have this information handy.

Business question 12:

You just received an appreciation letter from your manager regarding the report you created in question 2. Your manager is pleased with your work and appreciates all your efforts to make that a success. However, your manager wants you to do one last favor. It was difficult when using the report from question 2. The manager seeks to filter the report by the customer's full name. Please add a filter to the report you created in question 2, so it can be filtered using the full name.

Business question 13:

The modified report in question 12 is perfect, but the manager will like one last tweak. He wants you to mask the phone number of the customers for security reasons. He wants you only to display the last numbers, and the rest of them should be masked with an asterisk (\*). For example, 754-555-0137 becomes \*\*\*\*\*\*\*\*0137.

Business question 14:

The manager wants you to make one final modification to the report in question 13 and push it to QA. He wants you to mask the email address of the customers. He wants you to hide the name of the email and only leave the domain of those emails, so for example, [aaron.bryant@gmail.com](mailto:aaron.bryant@gmail.com) becomes \*\*\*\*\*\*\*\*\*\*\*\*\*gmail.com, [aaron.jai@gmail.com](mailto:aaron.jai@gmail.com) becomes \*\*\*\*\*\*\*\*\*\*gmail.com, and [aaron.li@gmail.com](mailto:aaron.li@gmail.com) becomes \*\*\*\*\*\*\*\*gmail.com. Please pay attention; the number of an asterisk (\*) should match the number of words you are replacing.

Business question 15:

HR is here again; the HR department manager wants you to generate datasets containing the first name and last name and a derived column called "Actual Age" This column should calculate the age of the employee when they were first employed in the company.

Business question 16:

HR wants to create a unique username for all employees. They remembered that you did a project two months ago on question 15. They want you to leverage that report and add a column called "UserID" this column should be made up of the first three characters of their address line 1, the last three of their city name, the length of their full name, first two of their continents, their last name, and their city population.