**Assignments**

**Sub-Queries**

1. Get data with all columns of the sales table, and customer name, customer age, product name, and category are in the same result set. (Use join in the subquery, refer to the database and tables from Assignments-05)
2. Get data from the sales table, product name, and category in the result set.
3. Without using the join concept create a sub-query by using the customer, product, and sales data.

**Functions: -**

**string functions: -**

1. Find the maximum length of characters in the Product name string from the Product table.
2. Retrieve product name, sub-category, and category from the Product table and an additional column named “product\_details” which contains a concatenated string of product name, sub-category, and category.
3. Analyze the product\_id column and take out the three parts composing the product\_id in three different columns.
4. List down comma-separated product names where the sub-category is either Chairs or tables.

**Mathematical functions: -**

1. You are running a lottery for your customers. So, pick a list of 5 lucky customers from the customer table using a random function.
2. Suppose you cannot charge the customer in fraction points. So, for a sales value of 1.63, you will get either 1 (or) 2. In such a scenario, find out.
3. Total sales revenue if you are charging the lower integer value of sales always.
4. Total sales revenue if you are charging the higher integer value of sales always.
5. Total sales revenue if you are rounding off the sales always.

**Date & Time functions: -**

1. Find out the current age of “batman” who was born on “April 6, 1939” in Years, months, and days.
2. Analyze and find out the monthly sales of the sub-category ‘chair’. Do you Observe any seasonality in sales of this sub-category.

**Joins: -**

1. Run the below query to create the datasets.
2. /\*Creating sales table for the year 2015\*/

* Create table sales\_2015 as select \* from sales where ship\_date between '2015-01-01' and '2015-12-31';
* select count(\*) from sales\_2015;
* select count(distinct customer\_id) from sales\_2015;

1. /\* Customers with ages between 20 and 60 \*/

* create table customer\_20\_60 as select \* from customer where age between 20 and 60;
* select count (\*) from customer\_20\_60;

1. Find the total sales that are done in every state for customer\_20\_60 and sales\_2015 table

Hint: Use Joins and Group By command

1. Get data containing Product\_id, Product name, category, total sales value of that product, and total quantity sold. (Use sales and product tables)