DBMS LAB 10 TASKS

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1 SCENARIO

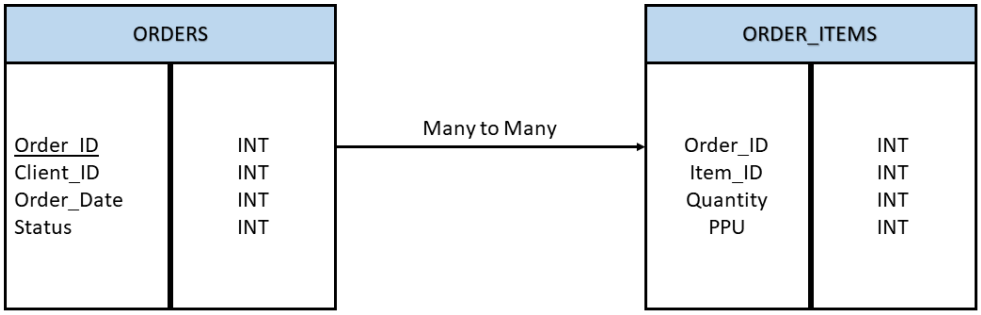

Figure 1: Given Schema

The Status column stores 1 if the Order is shipped, and 0 if it is not shipped.

2 INSTRUCTIONS

Carry out the following instructions:

1. Download and execute `TableGenerator.cpp`. It will create a file named `table.sql` which contains the required SQL queries to create and populate the database. The values will be randomized.

2. Make sure Oracle Database is installed in your PC. Login to your database (either using Command Prompt or SQL Command Line). Enter the command: `@directory\table.sql`. Here, (directory) should be replaced by the file path of table.sql file. If the file is stored in D: drive, the command will look like:

   ```
   @D:\table.sql
   ```

3. Write down your solutions in a text file. Submit the solution text file and the table.sql file in google classroom. Do not zip the files. At the end of each task, display your output for that task. Check the Sample Solution Format section to understand what your text file should contain. The name of the solution text file should be [studentid]_Lab10.txt e.g. 154443_Lab10.txt.

3 TASKS

3.1 Task 1

Write a function named `total_items_shipped` that takes a year as input and returns the total number of items shipped in that year. Show the output for the years 2002, 2006 and 2017.

3.2 Task 2

Write a function named `most_sold_item` that takes a year as input and returns the item that has been shipped most that year. Show the output for the years 2002, 2006 and 2017.

3.3 Task 3

Write a function name `profit_estimation`. This function will take a year as input. It will calculate the total revenue generated by the sale of shipped items that year. It will also calculate the total revenue lost due to unshipped items.

- If the revenue generated is between 50% and 65% of the summation of revenue generated and revenue lost, then the function should print "Average Year"
- If the revenue generated is between 66% and 79% of the summation of revenue generated and revenue lost, then the function should print "Good Year"
- If the revenue generated is greater than 79% of the summation of revenue generated and revenue lost, then the function should print "Excellent Year"
- If the revenue generated is less than 50% of the summation of revenue generated and revenue lost, then the function should print "A year of losses"
- Finally, as the return value, your function should return the total revenue generated by the sale of shipped items.

Show the output for the years 2002, 2006 and 2017.

4 SAMPLE SOLUTION FORMAT

```
--Task 1

CREATE OR REPLACE FUNCTION total_items_shipped(in_year INT)
RETURN NUMBER
IS
BEGIN
.
.
.
END
/

Output: 2002 - 245, 2006 - 585, 2017 - 848

--Task 2

CREATE OR REPLACE FUNCTION most_sold_item(in_year INT)
RETURN NUMBER
IS
BEGIN
.
.
.
END;
/

Output: 2002 - 1, 2006 - 5, 2017 - 3

--Task 3

CREATE OR REPLACE FUNCTION profit_estimation(in_year INT)
RETURN NUMBER
IS
```

```
BEGIN
.
.
.
END;
/

Output: 2002 - 2686(Average Year), 2006 - 3937(Average Year), 2017 -
    4851(Good Year)
```