Assignment 2: Total Marks – 15

Due Date: April 1st midnight

PART I – Create complete SDG database for the indicator of your choice. (5 marks).

Purpose: Learn to use import command to load larger tables with many rows. We will practice with "country_t" table and the "SDG_t" table during the lab in the week of March 19th. This will ensure your database is complete and filled in to write SQL queries on it.

1. In Microsoft Excel, save the table without the column headings, as "CSV UTF-8". This will ensure names with special characters also gets imported. When you resave CSV UTF-8, don't click save button, it causes errors, use SAVE AS again and ensure you have CSV UTF 8 selected before you hit save.
2. In PGAdmin, right click on the table and choose import. Choose filename, type as CSV, encoding UTF-8 then click import.
3. You may have to change the varchar lengths and re-run DDLs if imports fail.
4. When you run the drop table if exists, it would clean up the table so you can redo imports until its satisfactory for your purposes.
5. For GROUP BY selects: Make sure you have parent country column in the country_t in DDL in the create table code to be able to do group by later. If you have variation by age_group or sex then you can choose to do group by using those columns too.
6. After you complete all the data inserts, try to back up the whole database. Then create a new test database and try to restore using the backed up data. This is an essential skill for employment. After that, open SQL Editor and write the following queries.
7. Upload the backup of the database by Mar 26th in blackboard. (you can ask me questions during the lecture hour in case you had difficulties)

Part II – Simple and Advanced SQL Select queries (8 marks)

8. Write four simple Select Queries with WHERE condition filters on single tables, using >, =, BETWEEN, IN, LIKE etc. Practice ORDER BY, DISTINCT, Aliases, LIMIT while writing these. (4 marks)
9. Write a join to create a meaningful user display of a few columns from 2 or more different tables. Comment above the code about the purpose of the join. (1 marks)
10. Write a union with the same set of columns to create a meaningful UNION (1 mark)
11. Write a sub query to find a country name with a maximum or minimum value. Comment about the code about the purpose of the subquery(1 marks)
12. Write a group by with having (gender or age or LDC) to have a meaningful query (1 marks).

Part III – Efficient Physical Design Process (2 marks)

13. Create indexes for at least two columns of any two tables, columns that would be frequently used in WHERE filter OR in ORDER BY, GROUP BY in a SELECT. INDEX should be added to DDL file (1 mark)
14. Write a view with the join or union or any where that was created in PART II in the DDL file. (1 mark)

File to be submitted:

1. SDG_xyz.backup – 5 marks - upload by Mar 26th
2. DDL File – with create tables, create indexes and create views – 2 marks – April 1st
3. DML – Query –with all select statements – 8 marks – April 1st

---