**Working with Postgres using Air Pollution (Soramame) Database**

**1. Basics**

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| **S. No.** | **Purpose** | **Command and Example** |
| 1 | Connecting to the Postgres | psql -U userName -h hostIP  psql -U temp -h 163.143.165.136  **PWD: temp@14916** |
| 2 | Listing all of the databases that are accessible to you | \l |
| 3 | Connecting to a database | \c databaseName  \c soramame\_final; |
| 4 | Show all of the tables in a database | \d |
| 5 | Seeing the description of a table | \d tableName  \d station\_info; |
| 6 | Accessing the contents of a table | SELECT \* from tableName  SELECT \* from station\_info; |
| 7 | Accessing particular columns of a table | SELECT columnNamesSeperatedWithComma from tableName  SELECT stationid,address from station\_info; |
| 8 | Accessing few rows of a table | SELECT \* from tableName limit *numberOfRows*  SELECT \* from station\_info limit 10 |
| 9 | Printing the contents of a table in ascending or descending order of column(s) | SELECT \* from tableName order by columnName ASC/DESC  SELECT \* from station\_info order by stationid ASC |
| 10 | Quit from the Postgres | Control + D or \q |
| 11 | Backup the database into a SQL file | pg\_dump -U userName -h localhost -d databaseName > fileName.sql  pg\_dump -U temp -h localhost -d soramame\_final > soramame.sql |

**2. Advanced**

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| **S. No.** | **Purpose** | **Command and Example** |
| 1 | Dumping the SQL file into the database | psql -h hostname -d databasename -U username -f file.sql  psql -h 163.143.165.136 -d s1230000 -U s1230000 -f soramame.sql |
| 2 | Saving the output of a **SINGLE NESTED SQL** query into a file | Method 1 (from terminal):  psql -d DatabaseName -U UserName -c –h hostname "SELECT \* FROM TABLE" -o /root/Desktop/file.txt  psql -d s1230000 -U s1230000 –h 163.143.165.136 -c "SELECT \* FROM station\_info" -o ~/file.txt  (Open the file using head command and check its contents)  Method 2 (inside the postgres, must be a super-user):  COPY (SELECT \* FROM tableName) TO 'query.csv' (format csv, delimiter ';')  psql -U studentID -h 163.143.165.136  **PWD: studentPassword**  COPY (SELECT \* FROM station\_info) TO 'query.csv' (format csv, delimiter ';') |
| 3 | Saving the output of **MULTIPLE SQL** queries into a file | \o fileName.txt  Start executing queries one after another. Close the session by pressing Control+D  \o results.txt  SELECT \* FROM station\_info;  SELECT \* FROM hourly\_observations limit 10;  CONTROL + D |
| 4 | Deleting the columns of a table | Delete columnNamesSeperatedByComma from tableName  delete address from station\_info; |
| 5 | Drop a table in a database | drop table tableName;  drop table station\_info; |
| 6 | Drop a database | drop database databaseName;  drop database s1230000; |