# Assignment - SQL [Major]

| Grading | | | |
|---|---|---|---|
| **Event** | **Decoding Skills** | **Number of question not attempted** | **Overall Output** |
| **Assignment** | 0- If the learner does not submit the assignment or if he tries to attempt it but the applied hypothesis is wrong or showing an error.<br><br>10- If the learner clearly decodes the given data set or questions by performing the tasks defined in the question | 0 - If the learner does not solve any questions or solves less than 40% of the assignment correctly.<br><br>5 - If the learner successfully solves between 40-80% of the given questions.<br><br>10- If the learner solves 80-100% of the questions correctly | 0-If the output presented is completely wrong.<br><br>5- If the given output is partially correct along with incorrect presentation.<br><br>10- If all the answers are attempted correctly along with presentation skills |

1. Create a table “Station” to store information about weather observation stations:

| | | |
|---|---|---|
| ID | Number | Primary key |
| CITY | CHAR(20) | |
| STATE | CHAR(2) | |
| LAT_N | Number | |
| LONG_W | Number | |

2. Insert the following records into the table:

| ID | CITY | STATE | LAT_N | LONG_W |
|---|---|---|---|---|
| 13 | PHOENIX | AZ | 33 | 112 |
| 44 | DENVER | CO | 40 | 105 |
| 66 | CARIBOU | ME | 47 | 68 |

3. Execute a query to look at table STATION in undefined order.

4. Execute a query to select Northern stations (Northern latitude > 39.7).

5. Create another table, 'STATS', to store normalized temperature and precipitation data:

| Column | Data type | Remark |
|---|---|---|
| ID | Number | must match some STATION table ID(so name & location will be known). |
| MONTH | Number | Range between 1 and 12 |
| TEMP_F | Number | in Fahrenheit degrees,Range between -80 and 150 |
| RAIN_I | Number | in inches, Range between 0 and 100 |

There will be no Duplicate ID and MONTH combination.
6. Populate the table STATS with some statistics for January and July:

| ID | MONTH | TEMP_F | RAIN_I |
|---|---|---|---|
| 13 | 1 | 57.4 | .31 |
| 13 | 7 | 91.7 | 5.15 |
| 44 | 1 | 27.3 | .18 |
| 44 | 7 | 74.8 | 2.11 |
| 66 | 1 | 6.7 | 2.1 |
| 66 | 7 | 65.8 | 4.52 |

7. Execute a query to display temperature stats (from STATS table) for each city (from Station table).

8. Execute a query to look at the table STATS, ordered by month and greatest rainfall, with columns rearranged. It should also show the corresponding cities.

9. Execute a query to look at temperatures for July from table STATS, lowest temperatures first, picking up city name and latitude.

10. Execute a query to show MAX and MIN temperatures as well as average rainfall for each city.

11. Execute a query to display each city's monthly temperature in Celcius and rainfall in Centimeter.

12. Update all rows of table STATS to compensate for faulty rain gauges known to read 0.01 inches low.

13. Update Denver's July temperature reading as 74.9

**In the answer sheet, insert the query and the screenshot of the resultant output.**