### University Of Engineering and Technology, Lahore Computer Engineering Department

| Course Name: Database Systems                           | Course Code: CS363L               |
|---|-----------------------------------|
| Assignment Type: Lab                                    | Dated: 14-02-2022                 |
| Semester: 6 <sup>th</sup>                               | Session: 2019                     |
| Lab/Project/Assignment #: Lab 5                         | CLOs to be covered: CLO1 and CLO4 |
| Lab Title: Investigating Query Performance,             | Teacher Name: Ms. Darakhshan      |
| Understanding GitHub dataset and learning Collaboratory |                                   |

# **Lab Evaluation:**

| CLO1           | Construct DML queries to retrieve and store data in different relations               |        |        |        |        |        |
|----------------|---|--------|--------|--------|--------|--------|
| Levels (Marks) | Level1  | Level2 | Level3 | Level4 | Level5 | Level6 |
| Cognitive (5)  |   |        |        |        |        |        |
|                | Total /5  |        |        |        |        |        |
| CLO4           | Develop projects using learned techniques to solve real world problem with            |        |        |        |        |        |
|                | small/large data and learn how to query, visualize, report and make prediction on it. |        |        |        |        |        |
| Levels (Marks) | Level1  | Level2 | Level3 | Level4 | Level5 | Level6 |
| Cognitive (5)  |   |        |        |        |        |        |
|                |   |        |        |        | Total  | /5     |

# **Rubrics for Current Lab:**

| Scale      | Marks | Level | Rubric  |  |  |  |
|------------|-------|-------|---|--|--|--|
| Excellent  | 5     | L1    | Completed all questions (including bonus/Q6) and understands how tasks        |  |  |  |
|            |       |       | were solved + Have written optimized Queries and have used visualization      |  |  |  |
|            |       |       | techniques to understand dataset. Understands Github dataset, Python,         |  |  |  |
|            |       |       | BigQuery and their integration. No plagiarism.                                |  |  |  |
| Very Good  | 4     | L2    | Completed all questions (except bonus) and understands how tasks were         |  |  |  |
|            |       |       | solved. Students have used visualization techniques to understand dataset and |  |  |  |
|            |       |       | know how to do this in Python. Worked upon optimized queries. Understands     |  |  |  |
|            |       |       | BigQuery and Python Integration Student understands Github dataset.           |  |  |  |
|            |       |       | No plagiarism.  |  |  |  |
| Good       | 3     | L3    | Completed <b>Question 1, 2 and 3</b> and understands how tasks were solved.   |  |  |  |
|            |       |       | Student understand how to <b>visualize</b> datasets using Python and how to   |  |  |  |
|            |       |       | integrate BigQuery with Python. Student understands Github dataset and has    |  |  |  |
|            |       |       | worked on writing optimized queries.  |  |  |  |
|            |       |       | No plagiarism.  |  |  |  |
| Basic      | 2     | L4    | Completed Question I and 2 question only + Integration of BigQuery with       |  |  |  |
|            |       |       | Python is complete + Understands Query Efficiency. Student understands        |  |  |  |
|            |       |       | Github dataset.   |  |  |  |
|            |       |       | No plagiarism.  |  |  |  |
| Barely     | 1     | L5    | Solved Question I only and understands the dataset.                           |  |  |  |
| Acceptable |       |       | No plagiarism.  |  |  |  |
| Not        | 0     | L6    | Project missed or solved none of the problems                                 |  |  |  |
| Acceptable |       |       | -   |  |  |  |

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# **LAB DETAILS:**

### **Lab Goals/Objectives:**

- Project # 2 Out and its Demo
- Project # 1 Submission and Evaluation

## **Theory/Relevant Material:**

• Read project documents carefully

### **Lab Tasks:**

- Complete 1<sup>st</sup> section of Project 2
- Solve part (a), (b) and (c) of Section II of Project 2.

## **Submission Instructions:**

Name your notebook of section 1 of project 2 as DBLab5\_2019\_CE\_X.ipynb, add supporting SQL scripts of your homework and submit on Google classroom by Sunday, 20<sup>th</sup> February, 2022 9 P.M