University Of Engineering and Technology, Lahore
Computer Engineering Department

Course Name: Database Systems	**Course Code: CS363L**
Assignment Type: Lab	**Dated: 28-02-2022**
Semester: 6th	**Session: 2019**
Lab/Project/Assignment #: Lab 7	**CLOs to be covered: CLO4**
Lab Title: Reporting from datasets	**Teacher Name: Ms. Darakhshan**

Lab Evaluation:

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 **and document is properly formatted +** Rubric IV requirements.
Very Good	**4**	L2	Completed/Added **graph in PDF document +** Rubric III requirements.
Good	**3**	L3	Completed/Added **first four headings in Question 5 and has added them in PDF document +** Rubric II requirements**.**
Basic	**2**	L4	Completed **Question I, II, III and IV** + Rubric I requirements
Barely Acceptable	**1**	L5	Explored PDF libraries in Python and created one with at least one heading + Integrated Medicare dataset. No plagiarism.
Not Acceptable	**0**	L6	Lab missed or solved none of the problems

LAB DETAILS:

Lab Goals/Objectives:

- Creating PDF reports in Python with data coming from relational database.

Theory/Relevant Material/Helpful links:

- Connecting dataset with your application: https://www.blendo.co/blog/access-data-google-bigquery-python-r/
- Python PDF library: reportlab (https://www.blog.pythonlibrary.org/2010/03/08/a-simple-step-by-step-reportlab-tutorial/) or any other.

Instructions:

Dataset which you will explore in this lab is “Medicare”, taken from public datasets in bigquery.
You will create local python code files for this lab and connect the dataset using the link provided above. After successful connection, answer questions given below. You will need to create proper formatted PDF reports from the data generated by querying server (bigquery dataset). One of the sample PDF report is shared below.

Lab Tasks:

Your lab will be marked on the basis of following criteria.

- PDF libraries are linked, and a sample file should be generated containing at least one heading.
- Medicare dataset is integrated.
- Question number 1 is at least 75% solved.

Homework Questions:

Dataset: Medicare

1. How many in-patients and outpatients were dealt by each medical Centre from year 2011 to 2014?
2. List top 5 states with their total insurance claims.
3. Give the most common inpatient diagnostic conditions in the United States.
4. Which cities have the greatest number of cases for each diagnostic condition?

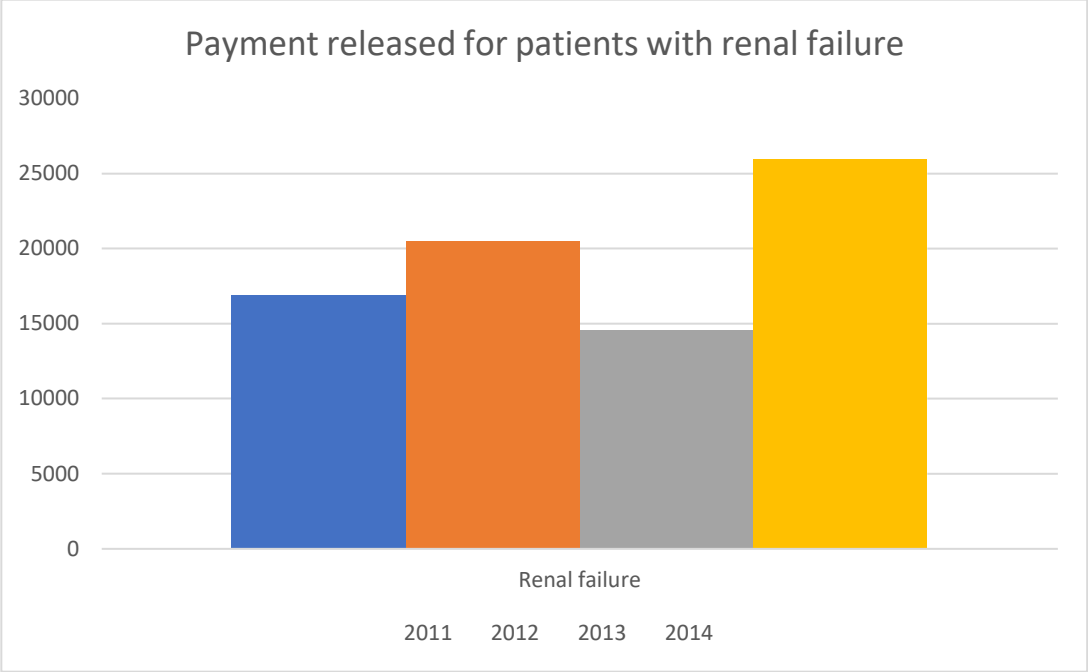
PDF Generation:

Using the link shared in SEC4, create PDF report for following questions.

5. For the patients with renal failure, generate following details from the dataset.

Payment Details for Patients with RenalFailure

Total number of in-patients in all medical centers	XXX
Total number of outpatients in all medical centers	YYY
Total average amount paid to inpatients	AAA
Total average paid to outpatients	BBB



Submission Instructions:

- Write your queries in any file (.txt or .docs), name it as DBLab7_Queries_2019_CE_X
- Name your generated pdfs (patient's info and graphs) as DBLab7_PatientInfo_2019_CE_X and DBLab7_Graphs_2019_CE_X
- Make a zip of all your files, name it as DBLab7_2019_CE_X and submit on google classroom by Sunday, 6th March, 2022 9 P.M