PROG3200 – Fall 2018

Assignment 01 – Due in class Week of October 8, 2017

To be completed **individually**. There are more than one way to answer the following questions. Be sure to format your output correctly so it is easily viewable. You may also include screenshots instead of text output if you wish. Include any required diagrams in your submission.

Please submit both an electronic soft copy to eConestoga as well as a hard paper copy to me. You may submit the paper copy to the mail slot on my office of 2A605 or hand it in to me in class the week of October 8. Please include the IT coversheet, which can be found on eConestoga.

Familiarize yourself with the CP/A assignment standards. You should, at a minimum, capitalize SQL language keywords (SELECT, FROM, JOIN, etc.). Identifiers should be in lower case separated by underscores where needed.

In this assignment we will be working with the data from a company Business Inc., which has a number of projects across several facilities. The data can be seen on page 2.

Question 1 [10 Marks]: Perform a decomposition of the table below to form a normalized schema of tables that yields limited redundancy. Document your schema design by describing the contents of each table, what the primary key is (creating any surrogate keys as necessary) and the relationships (foreign keys) to other tables in your schema. You could consider using a tool such as Visual Paradigm or Visio to do so.

Question 2 [10 Marks]: Create a list of commands to create the set of tables you described in Question 1. In addition to creating the appropriate tables and their columns, define the appropriate referential integrity constraints (primary keys and foreign keys) that relate the tables together. Also create any constraints that logically make sense for your table (NOT NULL, UNIQUE, etc.). Include both the commands, and the output from the DESCRIBE TABLE command for each completed table.

Question 3 [10 Marks]: Insert or load the data as included in the table below into the tables created in Question 2. Create any data not in the table below but that is required by your schema, as needed. Include any commands used to place the data into the table, and the results from a SELECT * on each table.

Question 4 [5 Marks]: Create a Project Size View, which lists the project name, project manager name, project budget and number of employees on the project. Include the view creation statement and the output from a SELECT * from this view.

Question 5 [5 Marks]: Create an SQL query to list the names of all employees currently working on the Financial Systems project.

Project Num	Project Name	Project Manager	Manager Salary	Manager Office	Project Budget	Employee Name	Dept. Number	Dept. Name	Employee Project Hourly Rate	Employee Office
001	Inventory System	Alan	150,000	A Building, Room 101	5,000,000	Alice	M001	IT	20.00	A Building, Room 201
						Bob	M002	Eng	25.00	A Building, Room 301
						Carl	M002	Eng	30.00	A Building, Room 302
002	Client System	Betty	120,000	B Building, Room 110	500,000	Carl	M002	Eng	20.00	A Building, Room 302
						Donna	M003	Finance	15.00	C Building, Room 101
003	Financial System	Christine	200,000	B Building, Room 120	1,000,000	Earl	M001	IT	25.00	A Building, Room 202
						Bob	M002	Eng	21.00	A Building, Room 301
						Donna	M003	Finance	20.00	C Building, Room 101
004	Delivery System	Alan	150,000	A Building, Room 101	2,000,000	Felicia	M003	Finance	25.00	C Building, Room 102
						Alice	M001	IT	21.00	A Building, Room 201
						Bob	M002	Eng	22.00	A Building, Room 301
						Carl	M002	Eng	25.00	A Building, Room 302
005	Human Resources System	Dan	200,000	A Building, Room 102	750,000	Gary	M001	IT	30.00	A Building, Room 203
						Hellen	M002	Eng	20.00	A Building, Room 303
						Ivan	M003	Finance	20.00	C Building, Room 103
						Donna	M003	Finance	20.00	C Building, Room 101
006	R&D Database System	Edward	175,000	B Building, Room 130	1,000,000	Felicia	M003	Finance	21.00	C Building, Room 102
						Earl	M001	IT	21.00	A Building, Room 202
						Jill	M002	Eng	20.00	A Building, Room 304
						Kevin	M002	Eng	25.00	A Building, Room 305
						Lenny	M001	IT	23.00	A Building, Room 204