

PROG3200 – Fall 2018

Assignment 03 – Due Week of Nov. 19, 2018

To be completed **individually**. There are more than one way to answer the following questions, so each student will most likely have different command sequences, variable names, etc. **Save each question as its own .sql script file. Please save the output from each question as its own .txt file. Be sure both your scripts and output are easily viewable.**

In this assignment you will be interacting with a schema created by the user studentdb. Please see the studentdb scheme in the Schemas section of Content on eConestoga. You may reference the tables with the notation studentdb.*table_name*.

Please submit both an electronic soft copy (all script .sql files and output .txt files) 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 into me in class the week of November 19. 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 may be in lower case or mixed case – strive for consistency. Be neat.

Question 1 – Working with associative arrays [10 Marks]:

Write an anonymous block using PL/SQL that contains an associative array populated with each instructor's full name (Salutation, first and last name). Display the entire contents of the associated array on the screen.

Question 2 – Working with varrays [5 Marks]:

Alter the anonymous block you have created in Question 1, and replace the use of an associative array with a VARRAY. Display the entire contents of the VARRAY on the screen.

Question 3 – Working with records and associative arrays [10 Marks]:

Write an anonymous block using PL/SQL that contains an associative array with the element type of a user created record. The record must contain the first name, last name and final grade average of an individual student. Display the entire contents of the associative array on the screen.

Question 4 – Working with records and nested tables [5 Marks]:

Alter the anonymous block you have created in Question 3, and replace the use of an associative array with a nested table. Display the entire contents of the nested table on the screen.

Question 5 – Working with objects [10 Marks]:

Create an object type named section_obj_t that contains all of the attributes of the SECTION table plus a course description from the COURSE table. Write an anonymous block that creates an objects using the section_obj_t type of the section with the section ID 100. Display all the information in the object on the screen (so print all the attributes of the section object). If no section exists, inform the user instead.

Create a second anonymous block which is a copy of the first, this time creating an object with the section ID 42.

Include the output from both anonymous blocks in your output text file.