

Carleton Class Database Project Proposal

Background

This project is motivated by the needs of Professor Nel for COMP3005. A Carleton Class database will monitor classes that Carleton Offers as well as the students registered in those classes. This will aide university students as it will display the courses needed for their degree as well the required prerequisites. This will also aide students while taking courses as the letter grade they receive will be a reflection on how well they understand the material.

The Carleton Class database will also be of use to professors as they are able to see how their students are doing in their class. This will allow for professors to adjust their teaching style or course content to aid the students in succeeding.

Finally, it will aid Carleton University as will keep track of all students and their required classes, their average, a class average for a professor and ultimately determine whether a student can graduate.

Application Requirements

The following requirements are needed as part of the database.

- R1) The database shall have the ability to store all classes offered by Carleton University
- R2) The database shall have the ability to display all classes offered by Carleton University and linked course information
- R3) The database shall have the ability to store all students and their information.
- R4) The database shall have the ability to link classes to students.
- R5) The database shall have the ability to store all professors and their information.
- R6) The database shall have the ability to link classes with linked students to a professor.
- R7) The database shall only display grades for the user student, the professor and Carleton University but shall be hidden from other students.
- R8) The database shall have the ability to show a professors averages in their class in order to make adjustments accordingly.

Due Diligence

Because the proposed database will have student and professor information linked, it will not require any legal information such as SIN. This will ensure that there are no legal implications with this database.

CPY1) It will be illegal if a student were to reproduce or redistribute course material as it has been created by Carleton University for learning purposes.

Sample Documents

Below are some samples of raw data for the database.

Sample Student Information

Name: Nathan MacDiarmid

Address: 1233 Colonel By Dr.

Student Number: 101098993

Degree: Software Engineering

Current Classes: COMP3005, SYSC 3110, SYSC 3120, ELEC2501, SYSC3310

Completed Classes: SYSC 2100, SYSC2004, SYSC2001, COMP1805, COMP2804

Classes to Complete: SYSC 4000, COMP3005, SYSC4106, SYSC3303

Average: A

Sample Professor Information

Name: Professor Nel

Address: 1233 Colonel By Dr.

Professor Number: 123456789

Classes: COMP3005A, COMP3005B

Class Average: B, A

Sample Course Information

Name: COMP3005

Sections: A, B

Professor: Professor Nel, Professor Nel,

Students: [Nathan MacDiarmid, etc], [Kevin McAlister, etc]

Prerequisites: [SYSC2100, SYSC2101] or [COMP2002 or COMP2402, COMP2004 or COMP2404]

Information: "Introduces students to concepts of database management systems, database design and file structures. Topics include: entity-relationship modeling and object oriented database design, data models (relational, network and object oriented), the relational algebra, SQL, normalization theory, physical data organization, object oriented databases and OQL." - Carleton University, COMP3005 Class Discription, 2021-2022.