**University of British Columbia, Department of Computer Science**

**CPSC 304**

**2016 Winter Term 2**

**Project Part : Completed project**

**Group Name: Group #4**

**Group Members:**

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above.

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia.

**What the project accomplished:**

The project we created accomplishes several things. First and foremost it allowed us as developers to choose our own design when creating a database application and to understand key steps of the process to do so. Secondly, it enabled us as a group to make decisions and reason out why they would be the best method of execution for the application. Thirdly, the project demonstrates the importance of using primary and foreign keys in our database. Another important purpose of this project was to learn about the aspects of the database that are less known or aren’t always applies of when designing a database such as the schema with all the keys and functional dependencies or the Entity Relationship Diagram. Finally, the project gives us an application perspective of designing a data model, thinking of the users and all the uses of the database.

**Final Schema:**

There were numerous differences between the initial schema and the final one. Going over the changes from the beginning we see that almost all the tables have had changes to them in our final application. In the Student table we added two more attributes, a username and a password. This is a simple mistake as we did give professors a password to login to our application. The next table with significant differences was the Pays table. Here we added an amountPaid attribute as a way to keep track of a student’s financial health. We did not use the courseID we initially planned to track as this functionality is possible with several table joins such as finding out which courses are taken by which student and then finding out the fee of those courses. With those changes the primary key for Pays changes to use the new attributes. Outside of these major changes the original schema was used as the main guide for the final application’s schema.