SOFE3700U – Data Management

Group 11 - University Database Management System

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1.1 Project

The project our team has decided to work on is a university database management system. In this project we will use the database to achieve a simulation of a real-life university database system. The database will be created to be used by many different users that will interact with the database in a university environment. It will demonstrate a working database system for different departments in the university such as the registrar office and different departments for specific majors. The university database system will also simulate how each student will be enrolled into their courses for the semester and a view for what courses they are enrolled in and can also view their transcripts as well. Each person that's part of the university will have a different role at the university and will access to the database for their unique purpose. The database system will keep track of all the students, professors, courses, and the administrators in the university. Each person/department will have different permissions for the database. An example of our database system function will be an administrator in the registrar office that will allow a new student/returning student to be placed in the database. Once the student is enrolled at the university, he/she can register for the courses that are available for their specific major.

1.2 Goals and Motivations

Our goal is to demonstrate a working and user-friendly database application that different users at a university will interact with the database. As students at Ontario Tech university, our group has always been curious about how the university's website is constructed and what challenges they faced when constructing a database system. Our group is looking forward to expanding our knowledge and learning the techniques/concepts that are required to build a database and how each entity interact among themselves. Our group feels this project gives us a scenario of a real-life working environment and helps us simulate a working environment to gain valuable experience.

1.3 Methodology

Our group will be working on the project in a work-live environment, due to COVID-19 pandemic all our meetings will be online. All/most of our meetings will be done on Discord where we have a dedicated server to ask any questions or issues that arise. As for coding, we will be using GitHub to upload most of our work BUT only the team lead will be able to update the codes that are published online. The project will be divided into a divide conquer like method. Each person in the group will be given a task to complete biweekly and once the task is done, the team lead will integrate it into the final project. Our team has decided to break down our team into 3 different roles, team lead, front-end, and back-end. Each person in our group has different skills they have acquired throughout their courses they have taken at Ontario tech and decided each member should apply their strongest skill they have attained to the project. Our team currently consists of 1 team lead, 2 back-end, and 2 front-end developers based off the skillsets our group has. Our team will be meeting each week throughout the semester to give an update on the project. Before our team starts implementing any code or setup the database system, we will construct a design and analysis for the project. Our team will construct formal requirements that will be implemented for each of the database system. Once the designing and modeling for the project is done, we can start to implement the model into code and start constructing our database.

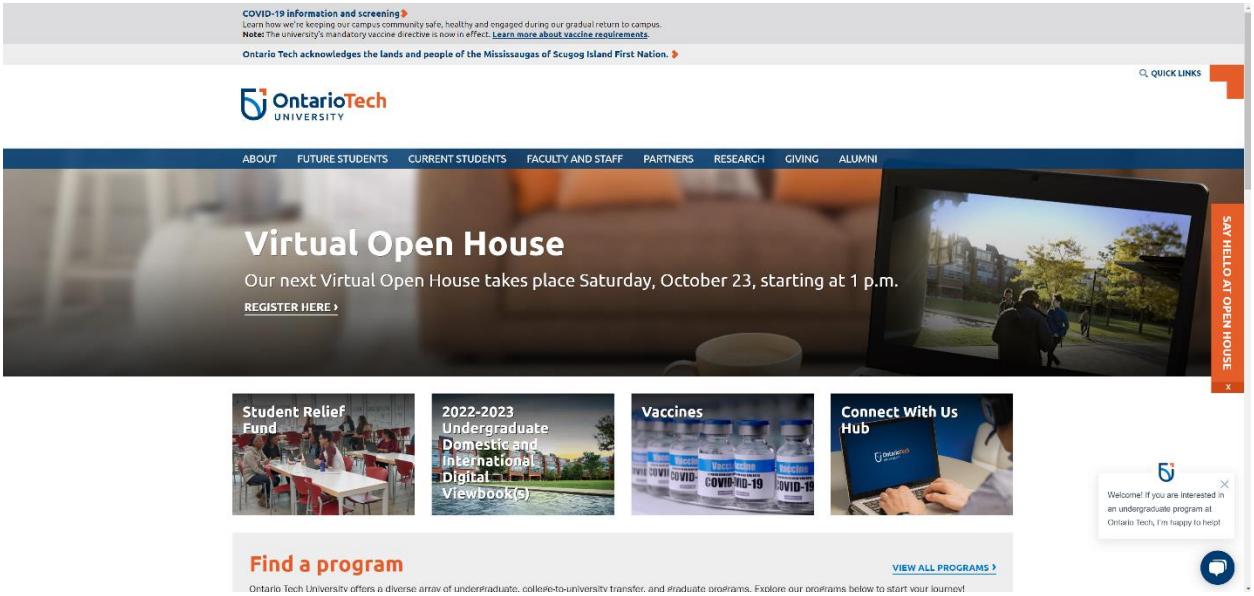
1.4 Related Work

There are a couple of related databases/websites that we can use as reference to our work. We have been investigating the Ontario Tech university MyCampus webpage and have been using that as a reference on how each entity are connected and what user will have which view of the application. We have been investigating the different portals on the Ontario Tech website. The portals we have been studying are the canvas page for students/professors and the MyCampus portal for students and administrators. Another reference our group will be using is the Carleton University webpage, both the references webpage is

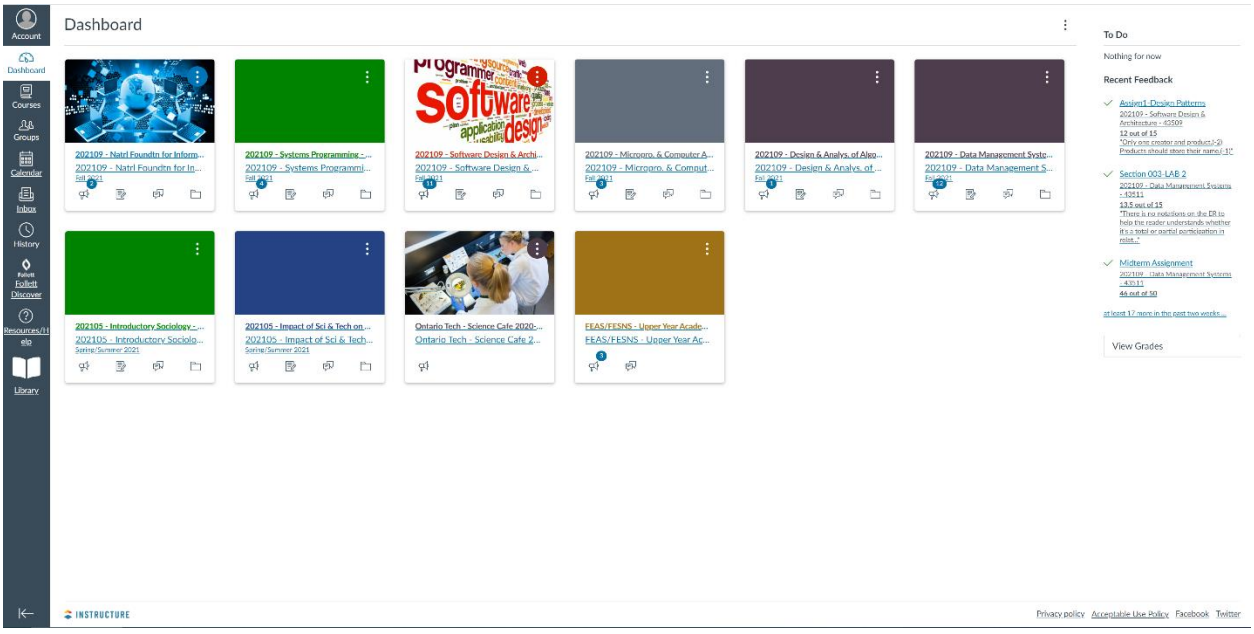
shown in Appendix 2. The references will be used in modeling and constructing our database system. Our project will be using the references we have at our disposal and will apply the techniques/concepts that are learned in this course to a real-life application of the university database system. The final product of our database will take the positive and strengths of our references and will be used to apply them to achieve a user-friendly working database that will differ from our references.

2.0 Appendix

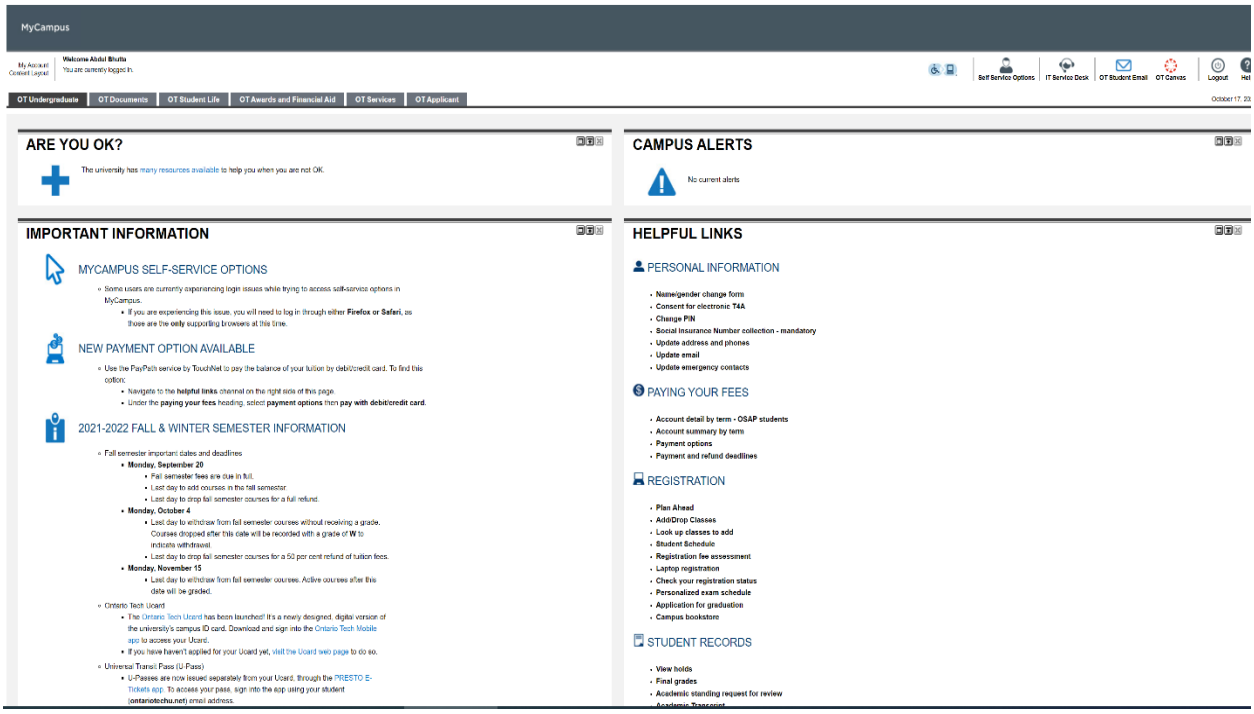
2.1 Ontario Tech University Website



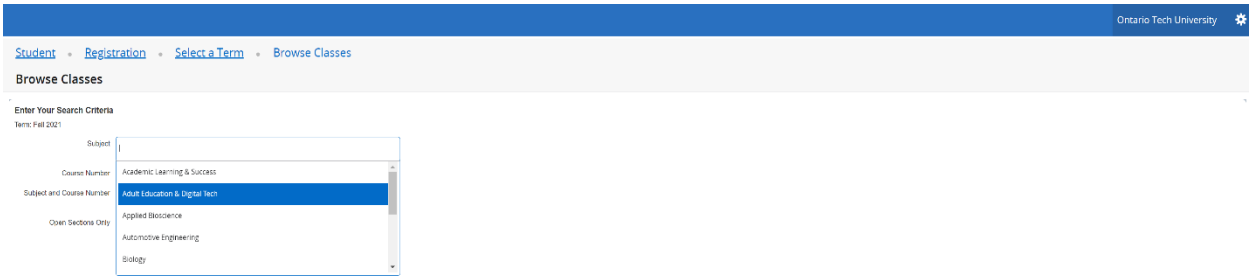
2.2 Ontario Tech Canvas



2.3 Ontario Tech MyCampus



2.4 Ontario Tech MyCampus Add/Remove Course



2.5 Carleton University Website