**Oscar So**

**CS 2024 – C++ Programming**

**Assignment #10: Bank!**

**Nov 13, 2019**

I believe that this assignment was not as tough or easy as expected and said on the assignment PDF. However, I did learn a lot about maps and pairs in the standard library for C++. Once again, I realized I had to use the C++11 compiler instead to make everything work. I made a lot of progress before going to office hours and didn’t have a lot of problems. I learnt how to use the std::for\_each function with uses a lambda function to iterate through the account pointers map and print the list. I also furthered my understanding towards pointers, which I didn’t learn well and understand during assignment 5 itself. Now, I understand more of it and understand how pointers work and how when we have a pointer, like \*account, we have to use account -> function() to get the function to apply.

The one problem I ran into, was the fact that my pointer was referencing something that was getting deleted. That meant that the output after I added a new account for list account would give me negative numbers and random question marks and symbols. After going to office hours, I realized that I was just making a BankAccount account inside the newAccount() function, which technically would get deleted after the function call was over. Therefore, I had to create an account pointer, like BankAccount \*account = new BankAccount, where the new would create a BankAccount in the global heap which would not be deleted. After changing this, everything worked well and the functions all worked out fine. I also learnt that an initialized pointer is actually pointing at the NULL value, so I had a function checking whether pointer != nullptr (which only works with c++11 format), when seeing whether an account has been selected or not.