C++ Programming Lab #3

Valparaiso University CS Department

March 2, 2023

Learning Objectives: Learn dynamic memory allocation within objects.

Turn-In Instructions Submit a screenshot of your code's output and copy that into a word document. Below the output, copy and paste your code.

Helpful Context Pointers exist in C++ just like they do in C. However, whereas you would often use malloc() in C, you can use the keyword 'new' in C++ to dynamically allocate memory. As review, memory is allocated dynamically when the compiler does not know how much memory to allocate at compile time. In other words, the amount of memory that is allocated often relies on user input, in one way or another.

1. Create a BankAccount class. In the BankAccount class, you will need to use dynamic memory allocation to create integer variables balance of the user and a String for the name of the user. You need to make an ID integer variable, but this will be statically allocated. The BankAccount class must have a constructor and a destructor.

2. Create a Driver Class where you utilize the BankAccount class you just made. Create five individual BankAccount objects and put them all in a vector. This allows you to iterate through the BankAccount objects using the advance() method.