CSE 232 SS13 Lab Session 7

1. Project 4
   1. Questions about output?
2. Arrays and Records
   1. Questions?
   2. Initialized arrays and the for-each loop
3. Project 5
   1. Did you read the extra notes?
   2. All set on file organization, input, output, error checking?
   3. Other questions?
4. Pointers
   1. Pointer is an address
      1. Pointer to a primitive type – starting address of the value
      2. Pointer to a record/class object – starting address of the object
         1. also address of first data member
      3. Pointer to an array – starting address of the array
         1. also address of first element
   2. Arrays are quite literally pointers in C++
      1. printing an array give you the address, with or without the '&' operator
      2. parameter syntax
   3. Referencing and dereferencing (& and \*)
5. Dynamic memory allocation
   1. Method to get block scope and programmer-defined lifetime
   2. Not terribly useful for primitive types
   3. Allows record/class objects to be created in one function, but stay alive afterward
   4. Allows size of an array to be chosen at runtime, and even resized
   5. Use “new” operator and assign result to a pointer
      1. Should always check that allocation was successful, as in lab and other examples
      2. syntax
   6. Must delete all dynamically allocated variables manually
      1. All memory will be freed when the program ends, but until then, you have a memory leak, which can grow over time
      2. syntax