**Meta-Assembler C++ Program:**

**Aim:** Create a meta-assembler program in C++

**Description:** The meta-assembler program, when run first uses file handling to read the Assembly language program from a text document. It then checks within a loop whether any of the opcodes in the document, match the opcodes stored in the struct. When there is a match, the program constructs a string with the opcode mnemonic, numeric code and operand then saves it to a .CDM file to be run in Cedar Logic.

This program uses the instruction table that I made for my Lab 7 extension portfolio circuits; hence, the mnemonics and their numeric code combination may be slightly different. To properly test the program, first ensure that the .CDM file is empty. Run the program, then once the console has displayed all the codes it has read from the text file check the .CDM file again. The data should be structured appropriately to be used with cedar logic.

The console output is only there to show the user that the text file with the program is being successfully read.

The Test Program stored in the .TXT file:

* Loads the value 4 into the accumulator
* Decrements this value by 1
* Uses Branch if not Zero to return 1 place backwards (back to the decrement by 1 step) when the value in the accumulator is not equal to zero
* Loop continues till accumulator value is 0
* When result is 0 it jumps back to the beginning and starts all over again