CECS 524
Assignment 10
Total: 30 Points

General Instruction

- If your program could not be executed on a command line environment, **zero** grade will be given for the program.

- Your submitted work will be examined by plagiarism detection tools. If you would share your work with others or submit others' work (including on-line resources), the case might be reported to the university.

- Submit `cpp` files via BeachBoard (Not email or in class).

1. (30 points) Write C++ program (without external library) that print all combinations that sum up to 'sum' by inserting the operators, '+' or '-', between digits in 'number'.

    i. The file names of the source codes should be `Assn10.cpp`.

    ii. The programs should read the command-line arguments passed to the program.

    iii. The first argument is 'number' and the second argument is 'sum'.

    iv. Using integer arithmetic operators '+' and '-', print all combinations that sum up to 'sum' by inserting the operators between digits in 'number'.

    v. Execution commands should be:

    ```
    g++ Assn10.cpp -o Assn10; ./Assn10 123456789 0
    ```

    vi. Expected output for the 'number=123456789' and 'sum=0'.
    There are 22 matched ones among $2 \times 3^8 = 13,122$ possible combinations.

    ```
    1 : 1+2-34-56+78+9=0
    2 : 1-2-34+5+6+7+8+9=0
    3 : 1-23-4-56-7+89=0
    ...
    12 : -1+2+34-5-6-7-8-9=0
    13 : -1+23+4+56+7-89=0
    14 : -1-2+34+56-78-9=0
    ...
    22 : -12-34+56+7-8-9=0
    ```