Variables, Operations, and Loops

Write a C program that generates multiplication tables using different loop structures.

TASK REQUIREMENTS:

- Generate a printed N×N table for values N=1 to 13 using for loops
- Table should have column headers showing each N value
- Create a reversed version(13 at top/left) using while loops
- Include clear code comments and consistent formatting
- Preserve the included sample text files for testing

SAMPLE OUTPUT

```
C:\PROG2007\ASSIGN1\cmake-build-debug\ASSIGN1.exe


TABLE OF PRODUCTS(FOR LOOP)
N     1     2     3     4     5     6     7     8     9     10    11    12    13
1     1     2     3     4     5     6     7     8     9     10    11    12    13
2     2     4     6     8     10    12    14    16    18    20    22    24    26
3     3     6     9     12    15    18    21    24    27    30    33    36    39
4     4     8     12    16    20    24    28    32    36    40    44    48    52
5     5     10    15    20    25    30    35    40    45    50    55    60    65
6     6     12    18    24    30    36    42    48    54    60    66    72    78
7     7     14    21    28    35    42    49    56    63    70    77    84    91
8     8     16    24    32    40    48    56    64    72    80    88    96    104
9     9     18    27    36    45    54    63    72    81    90    99    108   117
10    10    20    30    40    50    60    70    80    90    100   110   120   130
11    11    22    33    44    55    66    77    88    99    110   121   132   143
12    12    24    36    48    60    72    84    96    108   120   132   144   156
13    13    26    39    52    65    78    91    104   117   130   143   156   169



REVERSED TABLE OF PRODUCTS(WHILE LOOP)
N     13    12    11    10    9     8     7     6     5     4     3     2     1
13    169   156   143   130   117   104   91    78    65    52    39    26    13
12    156   144   132   120   108   96    84    72    60    48    36    24    12
11    143   132   121   110   99    88    77    66    55    44    33    22    11
10    130   120   110   100   90    80    70    60    50    40    30    20    10
9     117   108   99    90    81    72    63    54    45    36    27    18    9
8     104   96    88    80    72    64    56    48    40    32    24    16    8
7     91    84    77    70    63    56    49    42    35    28    21    14    7
6     78    72    66    60    54    48    42    36    30    24    18    12    6
5     65    60    55    50    45    40    35    30    25    20    15    10    5
4     52    48    44    40    36    32    28    24    20    16    12    8     4
3     39    36    33    30    27    24    21    18    15    12    9     6     3
2     26    24    22    20    18    16    14    12    10    8     6     4     2
1     13    12    11    10    9     8     7     6     5     4     3     2     1
```

```
Process finished with exit code 0
```

Submission Instructions

Video Recording Submission:

You will demonstrate the completion of this project via a **video screen-capture recording** of you using CLion, GitBash, and viewing your code to show completion of the **Video Submission Checklist**, which is posted on Brightspace. You will post **either your video file or a link to it**(e.g. a Microsoft Stream recording, make sure to give the instructor permissions to watch it), to the Brightspace Assignment 1 Dropbox prior to the deadline. If you are not sure of how best to capture such a video, seek advice from the instructor prior to the deadline.

NOTE: MAKE SURE TO SHOW EVERYTHING IN THE VIDEO SUBMISSION CHECKLIST STEP-BY-STEP. YOU WILL NEED AUDIO IN THE VIDEO FOR AT LEAST THE CODE REVIEW PORTION OF THE CHECKLIST