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Variables, Operations, and Loops

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

TASK REQUIREMENTS:

- Generate a printed NxN 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

TAB	LE OF	PRODU	CTS (F	OR LC	OP)								
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
б	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
REVI N	ERSED	TABLE	OF P	RODUC	TS(WH	ILE L	OOP)	6	5	4	3	2	1
13	169	156	143	130	117	104	91	78	65	52	39	26	13
⊥o	156	144	132	120	108	96	84	72	60	48	36	24	12
	T 0 0			110	99	88	77	66	55	44	33	22	11
12	143	132	121	T T U	22								
12 11		132 120	110	100	90	80	70	60	50	40	30	20	10
12 11 10	143						70 63	60 54	50 45	40 36	30 27	20 18	10 9
12 11 10 9	143 130	120	110	100	90	80							
12 11 10 9	143 130 117	120 108	110 99	100 90	90 81	80 72	63	54	45	36	27	18	9
12 11 10 9 8 7	143 130 117 104	120 108 96	110 99 88	100 90 80	90 81 72	80 72 64	63 56	54 48	45 40	36 32	27 24	18 16	9 8
12 11 10 9 8 7	143 130 117 104 91	120 108 96 84	110 99 88 77	100 90 80 70	90 81 72 63	80 72 64 56	63 56 49	54 48 42	45 40 35	36 32 28	27 24 21	18 16 14	9 8 7
12 11 10 9 8 7 6	143 130 117 104 91 78	120 108 96 84 72	110 99 88 77 66	100 90 80 70 60	90 81 72 63 54	80 72 64 56 48	63 56 49 42	54 48 42 36	45 40 35 30	36 32 28 24	27 24 21 18	18 16 14 12	9 8 7 6
12 11 10 9 8 7 6 5	143 130 117 104 91 78 65	120 108 96 84 72 60	110 99 88 77 66 55	100 90 80 70 60 50	90 81 72 63 54 45	80 72 64 56 48 40	63 56 49 42 35	54 48 42 36 30	45 40 35 30 25	36 32 28 24 20	27 24 21 18 15	18 16 14 12 10	9 8 7 6 5
12 11 10 9 8 7	143 130 117 104 91 78 65 52	120 108 96 84 72 60 48	110 99 88 77 66 55 44	100 90 80 70 60 50 40	90 81 72 63 54 45 36	80 72 64 56 48 40 32	63 56 49 42 35 28	54 48 42 36 30 24	45 40 35 30 25 20	36 32 28 24 20 16	27 24 21 18 15	18 16 14 12 10 8	9 8 7 6 5 4

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