

CS 1713, Multiplication Table, Mon Mar 23 1998

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runner% cat mult_table.c
#include <stdio.h>
#include <stdlib.h>

#define MAXNUM 13

void main(void)
{
    int i, j;
    printf("\n");
    for (j = 0; j < MAXNUM; j++)
        printf("%4i", j);
    for (j = 0; j < MAXNUM; j++)
        printf("\n-----");
    printf("\n");
    for (i = 0; i < MAXNUM; i++) {
        printf("%4i", i);
        for (j = 0; j < MAXNUM; j++)
            printf("%4i", i*j);
        printf("\n");
    }
}

runner% cat mult_table_2.c
#include <stdio.h>
#include <stdlib.h>

#define MAXNUM 13

void print_header(void);
void create_table(int m[][MAXNUM]);
void print_table(int m[][MAXNUM]);

void main(void)
{
    int m[MAXNUM][MAXNUM];
    print_header();
    create_table(m);
    print_table(m);
    exit(0);
}

void print_header(void)
{
    int j;
    printf("    * |");
}

    for (j = 0; j < MAXNUM; j++)
        printf("\n-----");
    for (j = 0; j < MAXNUM; j++)
        printf("%4i", j);
    printf("\n");

void create_table(int m[][MAXNUM])
{
    int i, j;
    for (i = 0; i < MAXNUM; i++)
        for (j = 0; j < MAXNUM; j++)
            m[i][j] = i*j;
}

void print_table(int m[][MAXNUM])
{
    int i, j;
    for (i = 0; i < MAXNUM; i++) {
        printf("%4i", i);
        for (j = 0; j < MAXNUM; j++)
            printf("%4i", m[i][j]);
        printf("\n");
    }
}

runner% mult_table
-----
0 0 0 0 0 0 0 0 0 0 0 0 0
1 0 1 2 3 4 5 6 7 8 9 10 11 12
2 0 2 4 6 8 10 12 14 16 18 20 22 24
3 0 3 6 9 12 15 18 21 24 27 30 33 36
4 0 4 8 12 16 20 24 28 32 36 40 44 48
5 0 5 10 15 20 25 30 35 40 45 50 55 60
6 0 6 12 18 24 30 36 42 48 54 60 66 72
7 0 7 14 21 28 35 42 49 56 63 70 77 84
8 0 8 16 24 32 40 48 56 64 72 80 88 96
9 0 9 18 27 36 45 54 63 72 81 90 99 108
10 0 10 20 30 40 50 60 70 80 90 100 110 120
11 0 11 22 33 44 55 66 77 88 99 110 121 132
12 0 12 24 36 48 60 72 84 96 108 120 132 144

runner% mult_table > out2.text
runner% mult_table_2 > out2.text
runner% diff out2.text out2.text
runner%

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