

University of Massachusetts Dartmouth  
Department of Electrical and Computer Engineering

ECE 160  
Project #5

Name: stars.cpp  
Due: see <http://ece160.org>

Write a program with a series of statements to produce each of the following patterns. Use only the following printf statements:

```
printf("*");      printf(" ");      printf("\n");
```

Each printf may only appear once in each segment of the program (no calling of functions allowed). A sample template of the program appears on the next page. For this project, your grade calculated by the completed number of patterns.

Pattern 1-3: 5 points each (max)      Pattern 7-8: 15 points each (max)  
Pattern 4-6: 10 points each (max)      Pattern 9: 25 points (max)

1.

```
*****  
*****  
*****
```

2.

```
*  
**  
***  
****  
*****  
*****  
*****
```

3.

```
*****  
*****  
*****  
***  
*
```

4.

```
*****  
*****  
*****  
*****  
*****  
****  
***  
**  
*
```

5.

```
      *  
     **  
    *****  
   *****
```

6.

```
      *  
     **  
    *****
```

7.

```
          *****  
          *      *  
        *      *  
       *      *  
      *      *  
      *      *  
*****
```

8.

```
*****  
*****  
*****  
*****  
***  
*  
***  
*****  
*****  
*****
```

9.

```
*****  
**     *     **  
* *   *   * *  
* * * * * *  
*     ***     *  
*     * * *   *  
* * * * * *  
* *     *   * *  
**     *     **  
*****
```

```

#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>

void main()
{

    printf("----- Pattern 1\n");

    // code to produce pattern 1
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 2\n");

    // code to produce pattern 2
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 3\n");

    // code to produce pattern 3
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 4\n");

    // code to produce pattern 4
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 5\n");

    // code to produce pattern 5
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 6\n");

    // code to produce pattern 6
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 7\n");

    // code to produce pattern 7
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 8\n");

    // code to produce pattern 8
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section

    printf("----- Pattern 8\n");

    // code to produce pattern 9
    // printf(" "), printf("*"), and printf("\n")
    // may only appear once in this section
}

```