

CS 3035, Fall 2022

In-Lab Exercise 5

Due: September 7, 2022 (11:59 AM noon)

The following programming exercise has two parts. Part 1 is compulsory for everyone and part 2 is optional for those who might want to attempt it. Please submit a zip/tar compressed file containing the following:

1. Your program for Parts 1 (and Part 2 if you attempted it). Both text file (.txt) or a C program file (.c) are acceptable.
2. A file with screenshot of your outputs for each part. Please submit this file as a PDF.

Part 1: Printing the following patterns using nested for loops

Write a program that prints the the following patterns with 10 rows. Use for loops to generate the pattern. All asterisks (*) should be printed by a single printf statement of the form `printf(“*”).`

Hint: The right aligned triangle requires that each line begins with an appropriate number of blanks.

A. Square

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

B. Left-aligned Triangle

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

C. Right-aligned Triangle

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

Part 2: Print the following additional Christmas tree pattern using for loops.

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