

# CS-594: Python Laboratory

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Lab Exam:- 1 [Duration : 3 hours]

## Instructions:

- Question 1 bears no partial marking. 1 mark will be awarded on the successful execution of 4 test cases
  - Question 2 bears partial marking of 1 mark. 1 mark will be awarded on successfully executing 2 test cases out of 4
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1. Write a program to print diamond star patterns. Take input N from the user where n is the number of rows as well as the column in star. Below is an example for N =7 [1 Mark]

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

## Diamond Star Pattern

2. .Given four different points in space, write a program to find whether these points can form a square or not. [2 Marks]

Example 1:

Input:

x1 = 20, y1 = 10, x2 = 10, y2 = 20,

x3 = 20, y3 = 20, x4 = 10, y4 = 10

Output: Yes

Explanation:

The points (20,10), (10,20), (20,20),  
(10,10) forms a square.

Example 2:

Input:

x1 = 2, y1 = 1, x2 = 10, y2 = 20,  
x3 = 5, y3 = 6, x4 = 10, y4 = 10

Output: No

Explanation:

The points (2,1), (10,20), (5,6),  
(10,10) doesn't form a square.