



Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
(Religious Jain Minority)

Department of Humanities and Applied Science

Academic Year: 2023-24

Name of Student: Vedant Nagesh Terse

Semester: II

Student ID:23104195

Class / Branch: F.E ALL

Date of Performance: 6/03/2024

Subject: C Programming

Date of Submission: 6/03/2024

Name of Instructor: Prof. [Vandana Virbhadre](#)

Experiment No.12

Aim: Write a program to print Diamond like star pattern using looping constructs.

PROGRAM:-

```
1#include <stdio.h>
2
3int main() {
4    int rows, i, j, space;
5
6    printf("Enter the number of rows for the diamond: ");
7    scanf("%d", &rows);
8
9
10   for (i = 1; i <= rows; i++) {
11       for (space = 1; space <= rows - i; space++) {
12           printf(" ");
13       }
14       for (j = 1; j <= 2 * i - 1; j++) {
15           printf("*");
16       }
17       printf("\n");
18   }
19
20   for (i = rows - 1; i >= 1; i--) {
21       for (space = 1; space <= rows - i; space++) {
22           printf(" ");
23       }
24       for (j = 1; j <= 2 * i - 1; j++) {
25           printf("*");
26       }
27       printf("\n");
28   }
29
30   return 0;
31 }
```

OUTPUT:-

```
apsit@apsit-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Desktop/G475/Exp12$ gcc Exp12.c
apsit@apsit-HP-Pro-Tower-280-G9-PCI-Desktop-PC:~/Desktop/G475/Exp12$ ./a.out
Enter the number of rows for the diamond: 5
 *
***
*****
*****
*****
***
 *
```