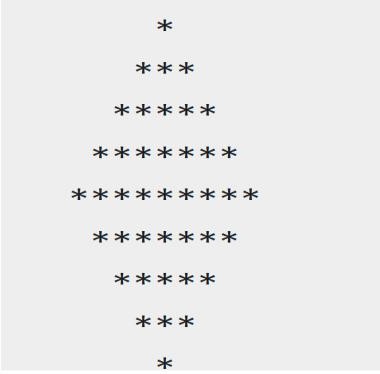
# GOVERNMENT ENGINEERING COLLEGE ,WEST CHAMPARAN

VORTEX 2.0

**ABACUS(Tech Titan)**

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| --- | --- |
| **TEAM NAME** |  |
| **LEADER** |  |
| **TEAM MEMBERS** |  |

**PROBLEM 1:** Write a program that prints a diamond-shaped pattern using asterisks (\*). The program should prompt the user to input the number of rows for the upper half of the diamond. The pattern should be symmetrical, with the number of stars increasing in the upper half and decreasing in the lower half, forming a diamond shape.



**PROBLEM 2:** Confuse your friends by jumbling the two words given to you. To don’t get yourself into confusion follow a pattern to jumble the letters.

Pattern to be followed is , pick a character from the first word and pick another character from the second word, Continue this process

Take two strings as input , create a new string by picking a letter from string1 and then from string2, repeat this until both strings are finished and maintain the subsequence. If one of the strings is exhausted before the other, append the remaining letters from the other string all at once.

OUTPUT FORMAT:

Enter First String: hello Enter Second String: world Merged string: hweolrllod

PROBLEM 3:

Design a simple DBMS for managing employee records with the following functionalities:

* **Add new employee records (ID, Name, Department, Salary).**
* **Display all employee records.**
* **Search for an employee by ID or Name.**
* **Update employee information.**
* **Delete an employee record.**

PROBLEM 4:

You are given an array, You have to choose a contiguous subarray of length ‘k’, and find the minimum of that segment, return the maximum of those minimums.

Sample input 0

1 → Length of segment x =1 5 → size of space n = 5

1 → space = [ 1,2,3,1,2]

2

3

1

2

Sample output 3

PROBLEM 5:

A company has a list of jobs to perform. Each job has a start time, end time and profit value. The manager has asked his employee Anirudh to pick jobs of his choice. Anirudh being greedy wants to select jobs for him in such a way that would maximize his earnings.

Given a list of jobs how many jobs and total earning are left for other employees once Anirudh

Picks jobs of his choice.

Note: Anirudh can perform only one job at a time.

# ALL THE BEST !