

Jaypee University of Engineering and Technology, Guna
B.Tech. CSE, Semester V
Advanced Programming Lab - II (18B17CI573)

Lab Exercise 1

1. Write a Java program to print the following pattern on the console after asking the value of 'n' from user.

For n=4:

```

                1
            1      2
        1      2      3
    1      2      3      4
        1      2      3      2      1
            1      2      3
                1
```

Ask the value of n from user at runtime.

2. Solve the question present on the following link by following options and also comment on Time and Space complexity of the code:
 - a. use Array to solve the question
 - b. use Vector to solve the question
 - c. Solve the question in a most optimized way.

Question1 Link: <https://www.interviewbit.com/problems/different-bits-sum-pairwise/>

Question2 Link: <https://leetcode.com/problems/total-hamming-distance/description/>

3. Solve the following question using the functions of string class in java.

Question Link: <https://leetcode.com/problems/find-all-anagrams-in-a-string/description/>

4. Solve the following question using java.

Question Link:

<https://www.hackerrank.com/challenges/java-anagrams/problem?isFullScreen=true>

5. Solve the following questions using java:

- a. <https://www.hackerrank.com/challenges/welcome-to-java/problem?isFullScreen=true>
- b. <https://www.hackerrank.com/challenges/java-stdin-and-stdout-1/problem?isFullScreen=true>
- c. <https://www.hackerrank.com/challenges/java-stdin-stdout/problem?isFullScreen=true>
- d. <https://www.hackerrank.com/challenges/java-output-formatting/problem?isFullScreen=true>
- e. <https://www.hackerrank.com/challenges/java-datatypes/problem?isFullScreen=true>