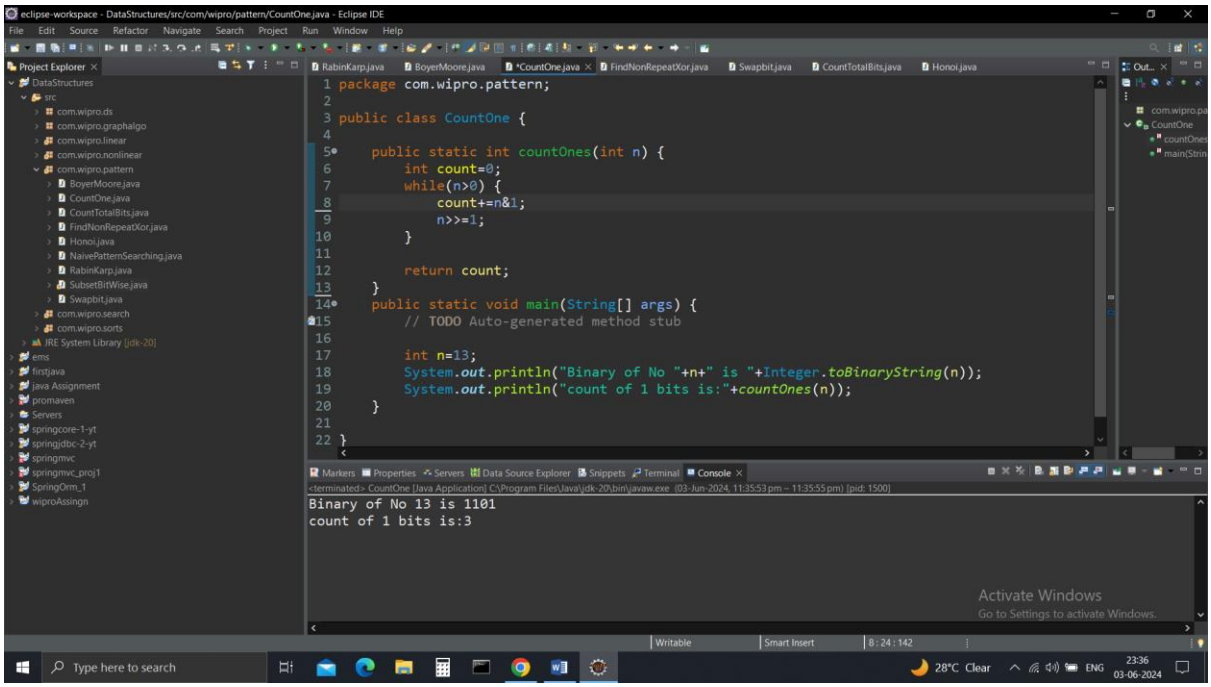
Task 1: Bit Manipulation Basics

Create a function that counts the number of set bits (1s) in the binary representation of an integer. Extend this to count the total number of set bits in all integers from 1 to n



Task 2: Unique Elements Identification

Given an array of integers where every element appears twice except for two, write a function that efficiently finds these two non-repeating elements using bitwise XOR operations.