**Diya Goyal 102215255 2NC11**

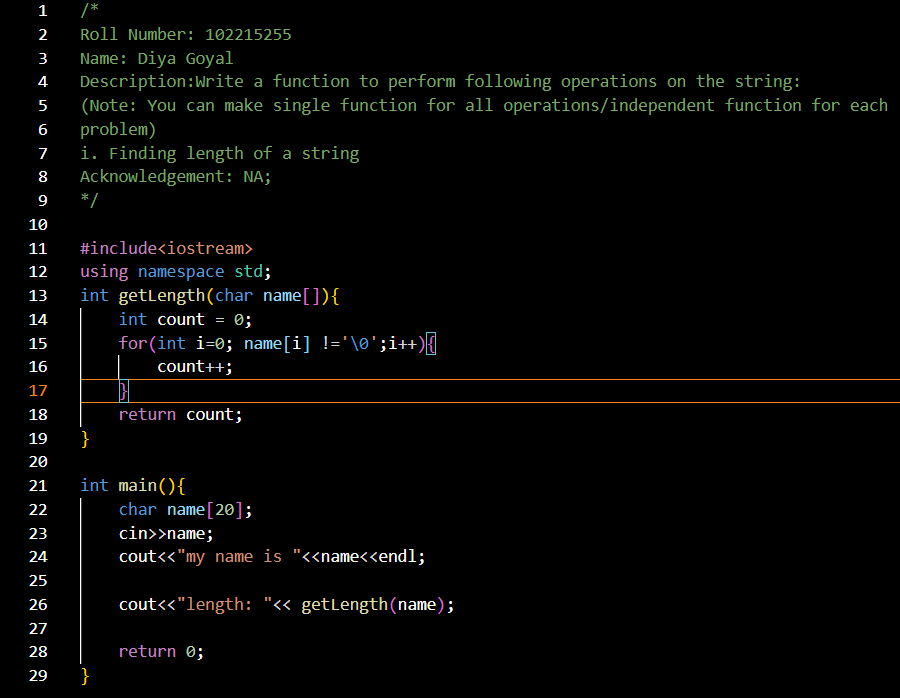
**Lab Assignment 3**

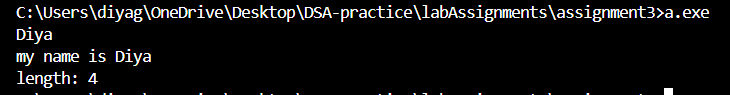
**UCS 406 Data Structures and Algorithms**

Note: Use C/C++ or JAVA programming language.

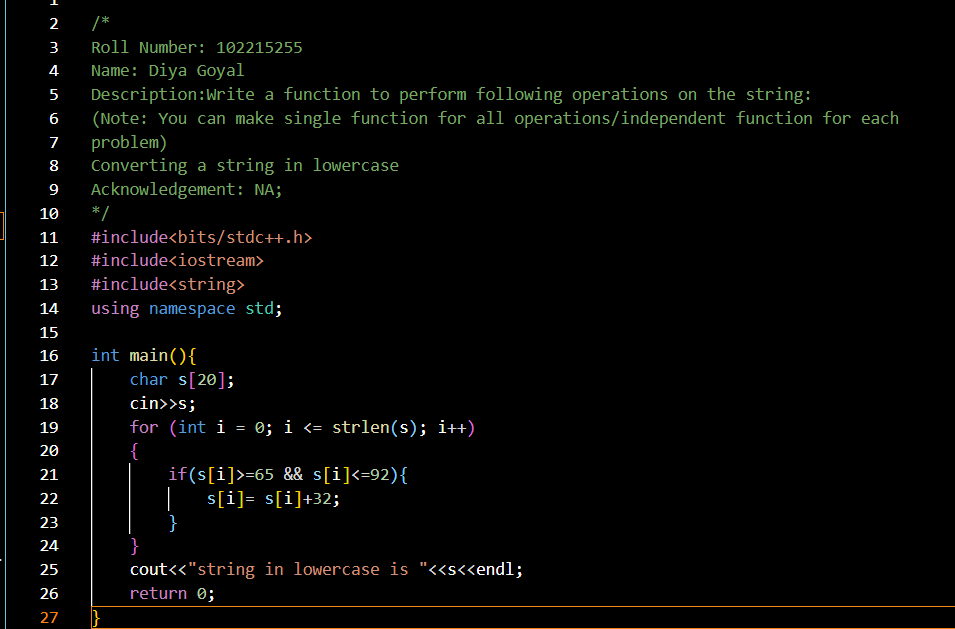
Q1. Write a function to perform following operations on string.

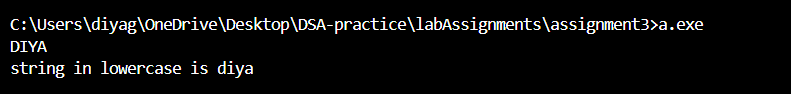
1. Find the length of string.

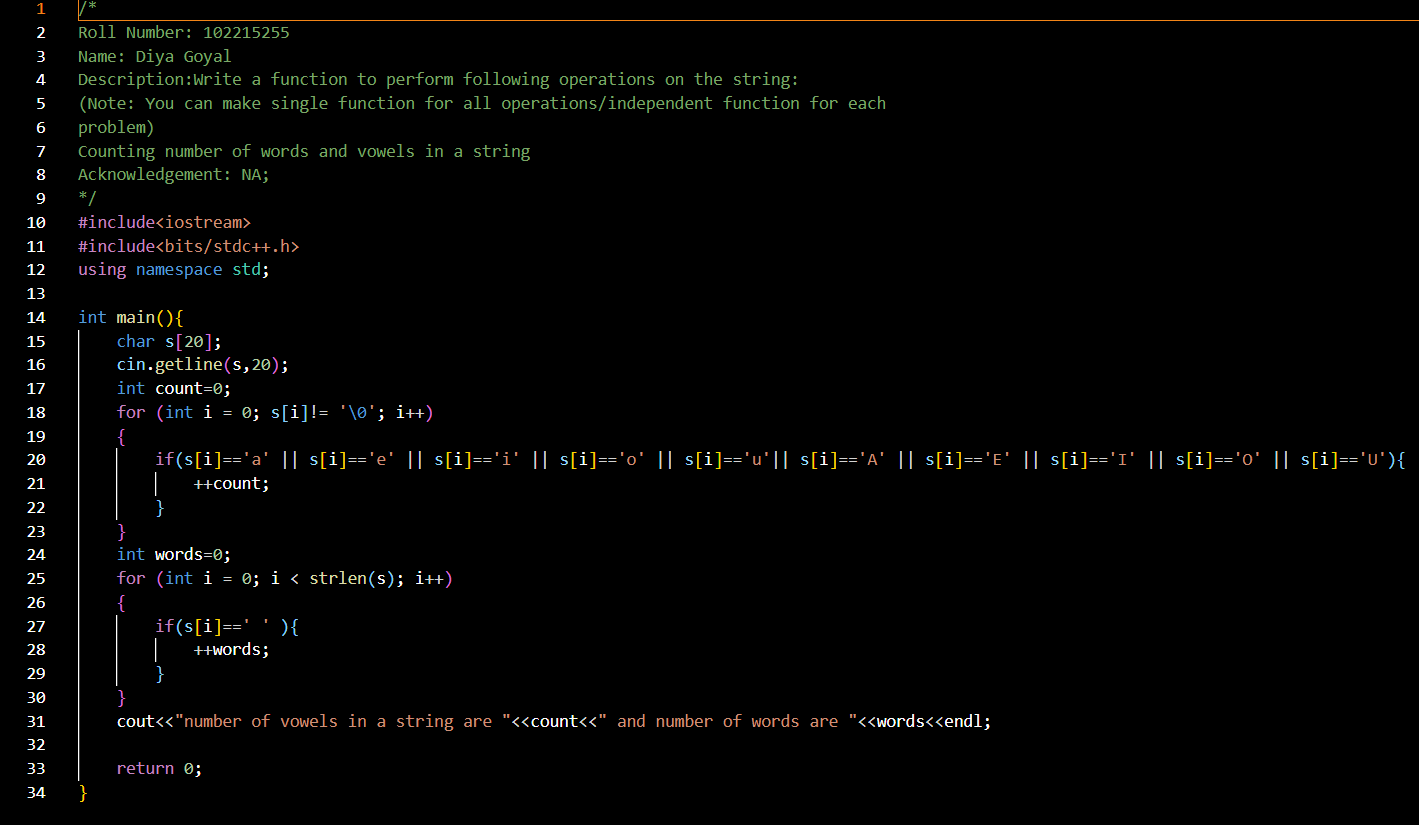


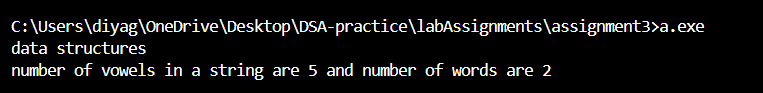


1. Converting a string to lower case.

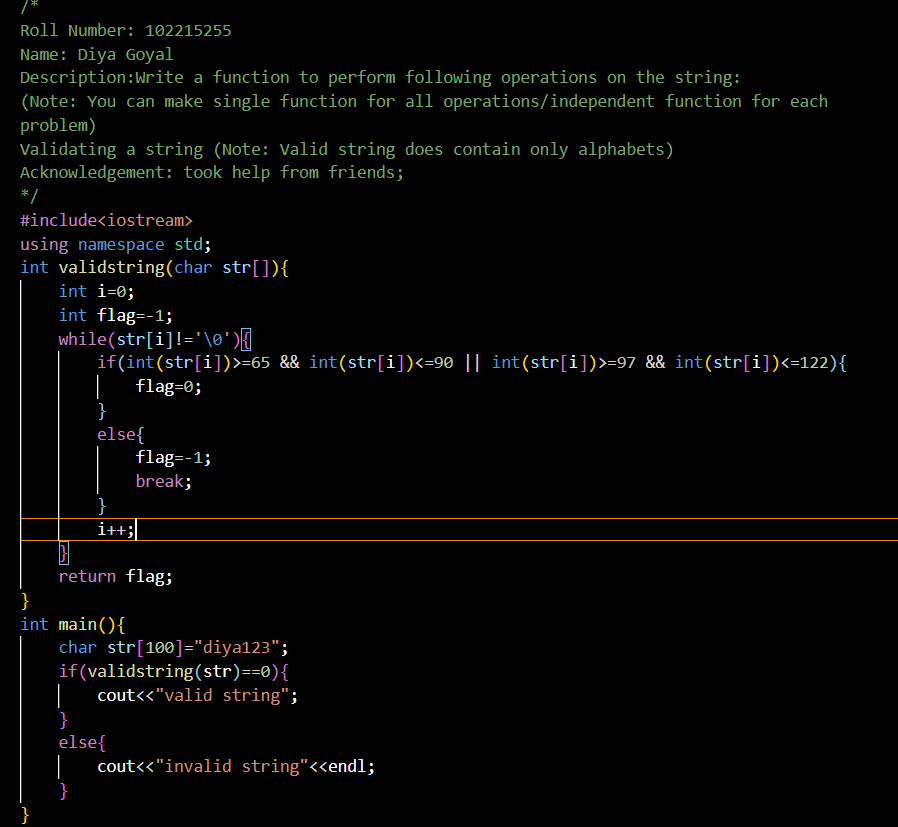


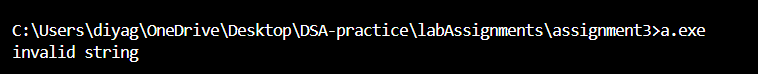


1. Counting number of words and vowels in a string

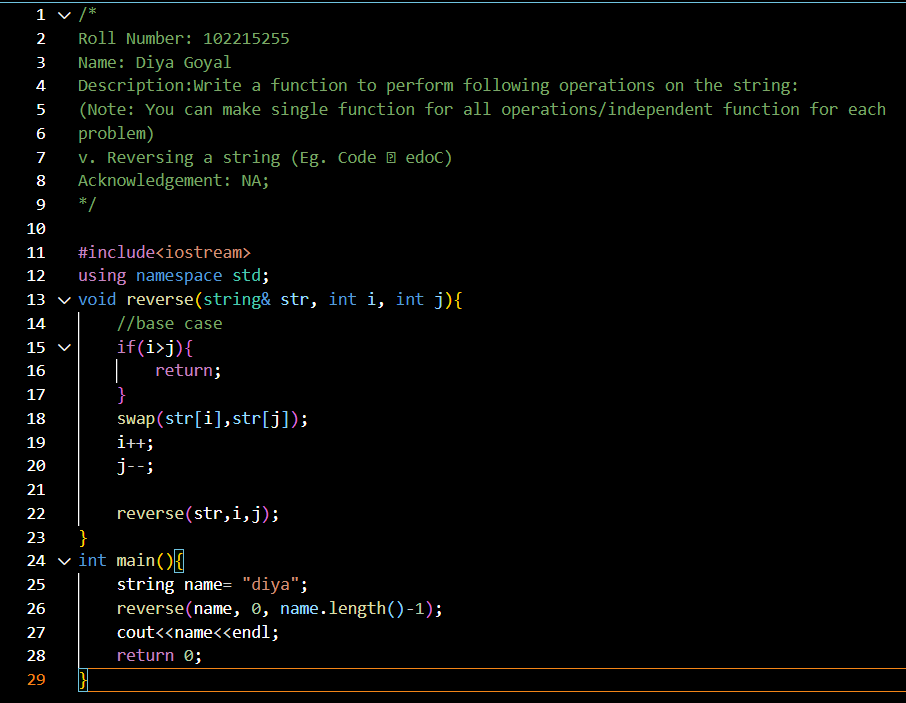


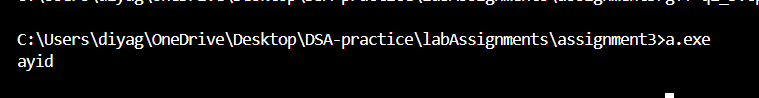
1. Validating a string



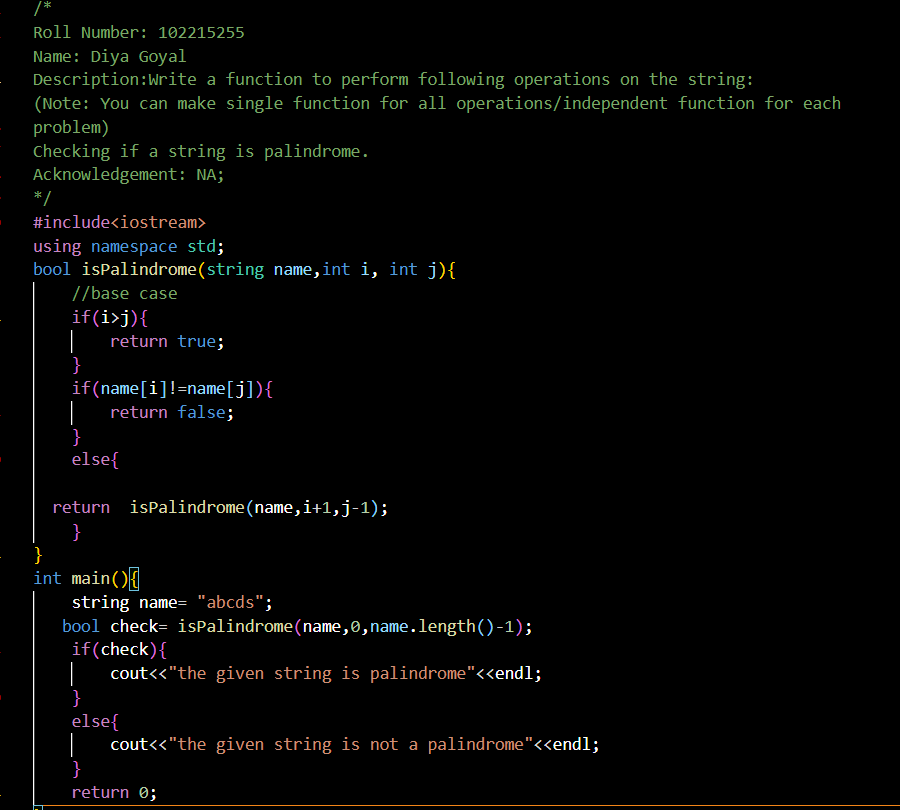


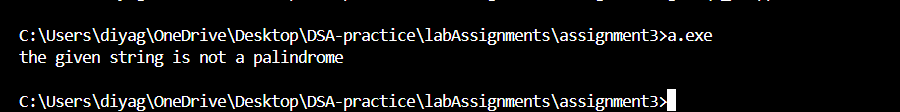
1. Reversing a string (Eg. Code  edoC)





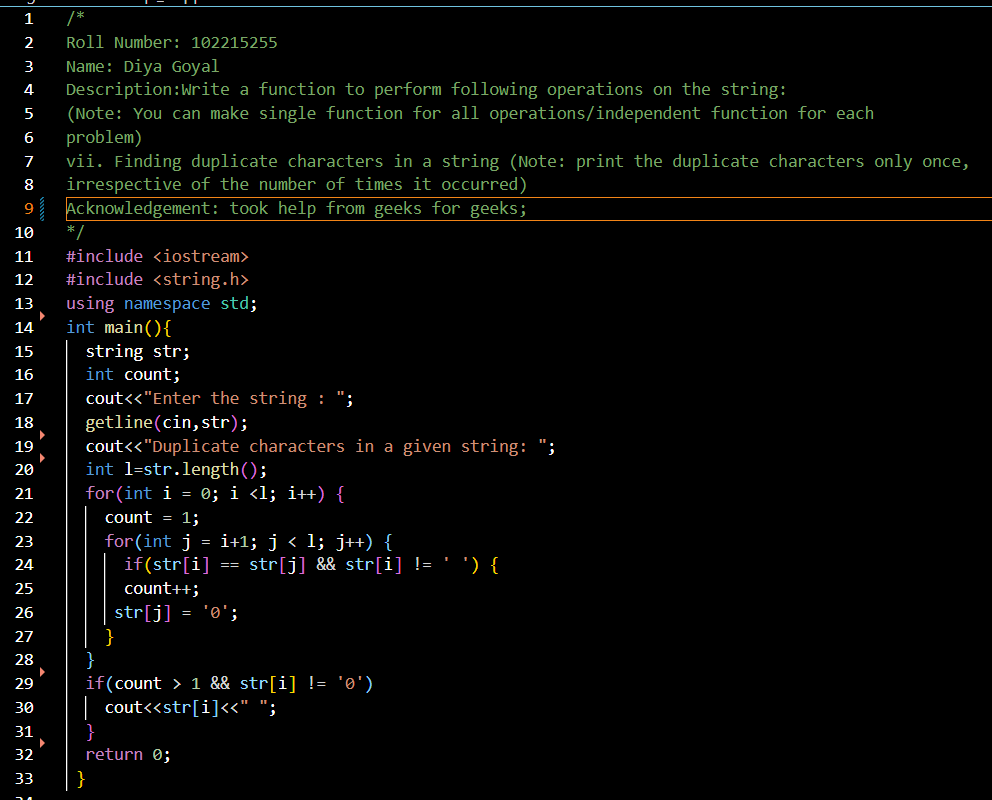
1. Checking if a string is palindrome.

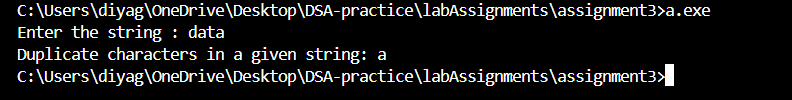




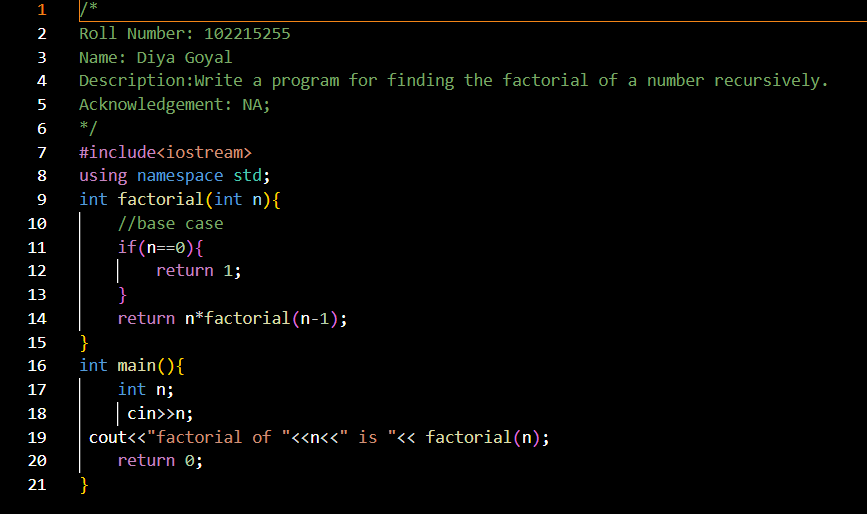
1. Finding duplicate characters in a string (Note: print the duplicate characters only once,

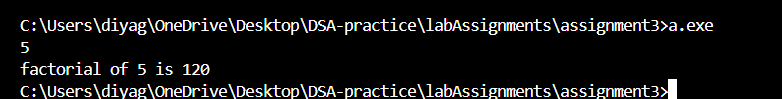
irrespective of the number of times it occurred)



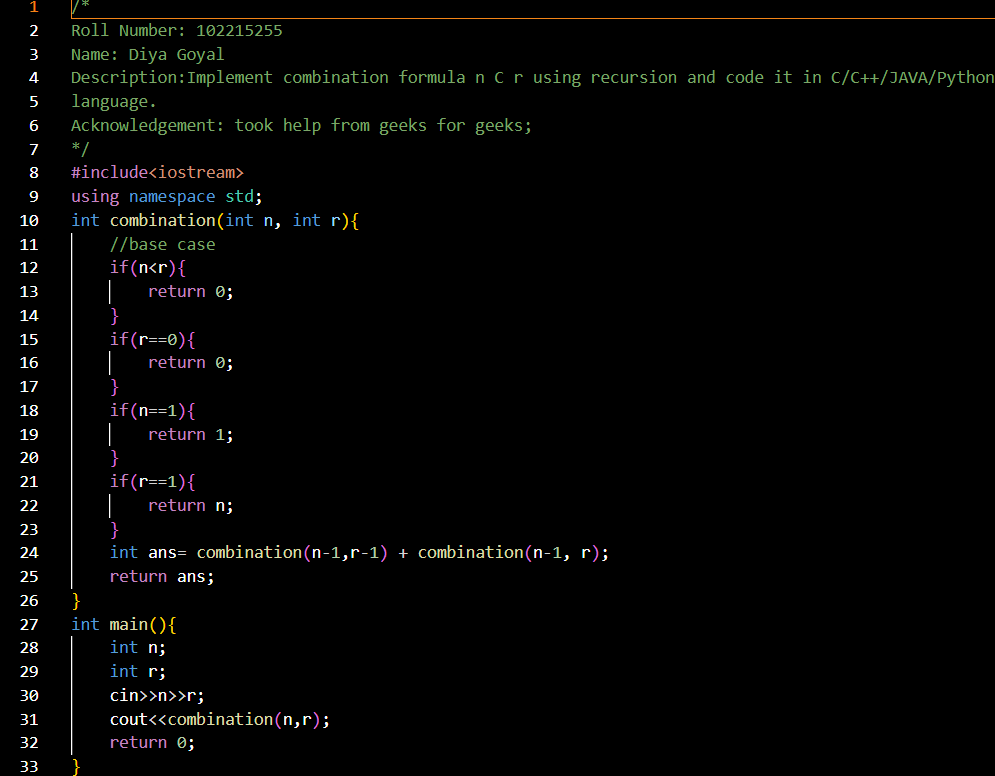


Q2. Write a program to find factorial of a program recursively.

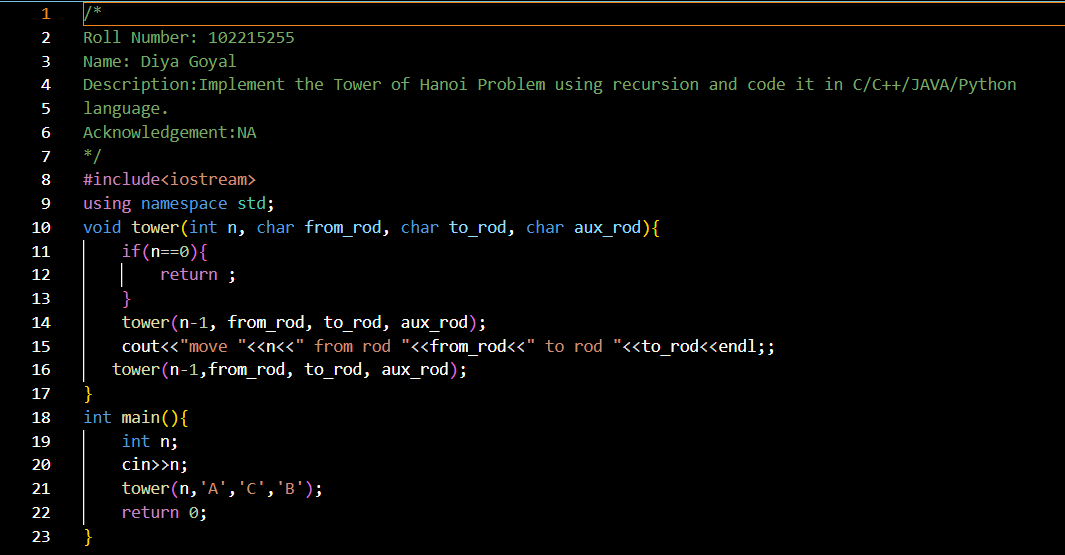


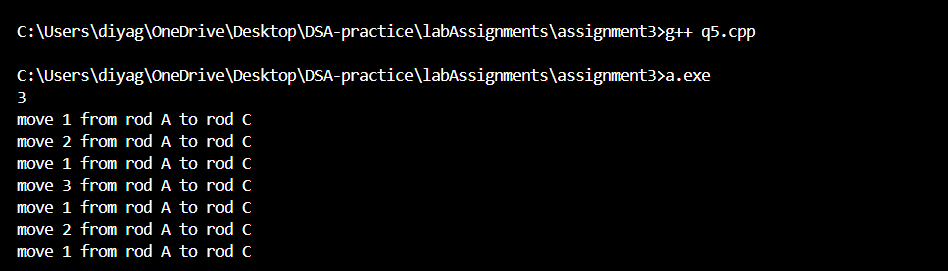


Q3. Implement combination formula n C r using recursion and code it in C/C++/JAVA/Python language.



Q4. Implement the Tower of Hanoi Problem using recursion and code it in C/C++/JAVA/Python language.





Q5. Implement the Fibonacci series using recursion and code it in C/C++/JAVA/Python language.

