## Functions, Pointers, and Arrays

- a) Implement a bank management system with C++ functions to handle transactions, account balances, and user authentication, thereby enhancing modularity, code reusability, and the overall efficiency of the program.
- b) Develop a C++ program that swaps two integer values using pointers. Use type casting to access and manipulate the values through pointers.
- c) Develop a C++ program to implement a student grade tracker using arrays. Create an array to store the grades of multiple students and implement functions to calculate the average, find the highest and lowest grades, and display the overall performance.
- d) Implement a dynamic array that allows users to input values and resize the array dynamically as needed.
- e) Write a function that takes an integer array and finds the maximum and minimum values without using built-in functions.
- f) Develop a program that multiplies two matrices using functions for input, processing, and output.
- g) Write a function that reverses a string using pointers instead of indexing.
- h) Implement Bubble Sort using function pointers to allow sorting in ascending or descending order dynamically.
- i) Write a function to merge two sorted arrays into a single sorted array using pointers.
- g) Implement a function that checks if an array is a palindrome using pointers.