

Lab 4

1. Create a class time having data members as hour, minute and second. Then add two time objects taking object as an function argument and subtract two time objects taking objects as an function arguments and as well as returning object by the function concept. Implement nameless temporary object concept somewhere in your code.
2. Write a program to implement Pointer to object and member access.
3. Write a C++ program that demonstrates the dynamic memory allocation for objects and object arrays. Create a class called Rectangle with private member variables length and width and member functions to set and display the dimensions of a rectangle. Implement the following functionalities:
 - i. Dynamically create a single Rectangle object by allocating memory using new and set the dimensions of the rectangle object.
 - ii. Display the dimensions of the rectangle object.
 - iii. Dynamically create an array of Rectangle objects by allocating memory using new and set the dimensions of each rectangle in the array.
 - iv. Display the dimensions of each rectangle in the array.
4. Create a C++ program that simulates a banking system. Define a class called BankAccount with private member variables accountNumber, balance, and a static member variable totalAccounts to keep track of the total number of bank accounts created. Implement the following functionalities:
 - i. A constructor that initializes the accountNumber and balance variables and increments the totalAccounts count.
 - ii. A member function deposit() that takes an amount as input and adds it to the balance of the account.
 - iii. A member function withdraw() that takes an amount as input and subtracts it from the balance, only if the balance is sufficient.
 - iv. A static member function getTotalAccounts() that returns the total number of bank accounts created.
5. Define a structure called BankAccount to represent a bank account with attributes such as account number, account holder name, and account balance. Include methods to deposit and withdraw money from the

account. In the main function, create an instance of the BankAccount structure, prompt the user for account details and initial balance, perform a deposit, perform a withdrawal, and print the updated account balance.