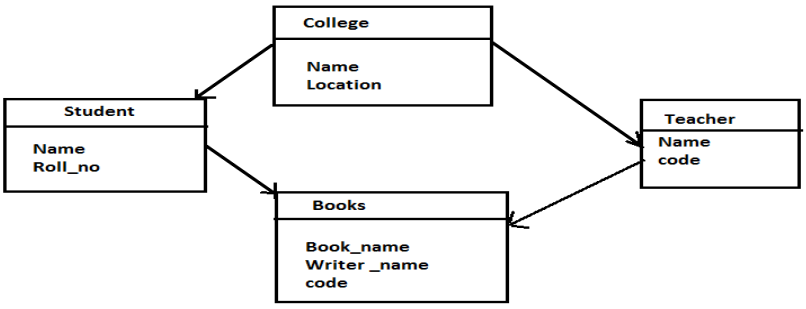
C++ Lab Exam Question

1. Create classes called class1 and class2 with each of having one private member .Add member function to set a value(say setvalue) one each class. Add one more function max() that is friendly to both classes. max() function should compare two private member of two classes and show maximum among them. Create one-one object of each class and then set a value on them. Display the maximum number among them.
2. Write a program to find the largest of four integers .your program should have three classes and each classes have one integer number
3. Write a program to swap the values of two different classes using friend function.
4. Write a program to find sum of two complex number using friend class.
5. Using class write a program that receives inputs principle amount, time and rate. Keeping rate 8% as the default argument, calculate simple interest for three customers.
6. Write a program to input n numbers and find their sum using dynamic memory allocation.
7. Write a program to illustrate the use of static member function.
8. Write a program to find sum of two times by implementing constructor.
9. Write a program to ding sum of two heights by implementing constructor.
10. Create a class called Book with data members (book name, publication name, published year, price). Create a constructor to initialize the data members of the book, a function cmpPrice() to compare the price of a book, and a function display() to display the information of the book. In the main function, create two objects of the Book class and display the information of the book which has the lowest price.
11. Write a program to illustrate the dynamic constructor.
12. Write a program to illustrate the concept of virtual base class.
13. Write a program to illustrate the concept of composition.
14. Consider the class network of the following figure



The **Books** class derives information from both the **Student** and **Teacher** classes, which in turn derive information from the **College** class. Define all four classes with at least one parameterized constructor and a **void display()** method in each class. In the **main()** function, create an object of the **Books** class, initialize all data members, and display them.

15. Write a program that illustrate the concept of runtime polymorphism.
16. Write a complete program to convert the polar coordinates into rectangular coordinates using suitable type conversion method.
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18. Write a program to convert kilogram into gram using user defined to user defined type conversion.[Hint : 1kg=100gm]
19. Write a program that illustrates the concept of exception handling.
20. Write a program to illustrates the multiple catches.
21. Create a function template to swap two integers, two floating point data and two characters.
22. Create a function templates to find the roots of the quadratic equation.
23. Write a program to illustrate opening and closing a file using constructor.
24. Write a C++ program to illustrate reading and writing into multiple files.[Hint: opening files using open]
25. Write a program that stores objects of student class (assume data members are roll, name and university_name) into a file and read values from the file and display data in console.