MAULANA MUKHTAR AHMAD NADVI TECHNICAL CAMPUS
DEPARTMENT OF COMPUTER ENGINEERING
Academic Year 2024-25

Subject: Object Oriented Programming Using C++ (22316)
Class: SY computer
Date:

Instructions:

1) All questions are compulsory,
2) Illustrate your answers with neat sketches wherever necessary.
3) Figures to the right indicate full marks.
4) Assume suitable data if necessary.

Assignment No.3

Q1. Write syntax to define a derived class.

Q2. Describe the concept of virtual base class with suitable example.
Note: Program/diagram with syntax shall be considered as an example.

Q3. State and describe visibility modes and its effects used in inheritance.
(Note: Diagram is optional)

Q4. What are the rules for virtual function?

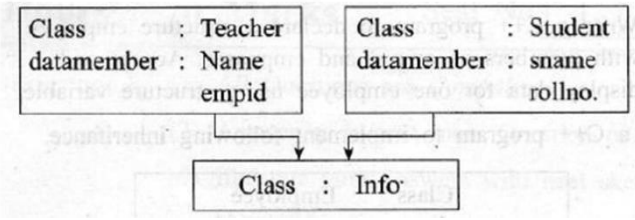
Q5. What is inheritance? Give different types of inheritance.

Q6. What is multilevel inheritance? Draw the diagram to show multilevel inheritance. using Classes with data member and member function.

Q7. Write a C++ program to declare a class 'College' with data members as name and college code. Derive a new class 'student' from the class college with data members as sname and roll no. Accept and display details of one student with college data.

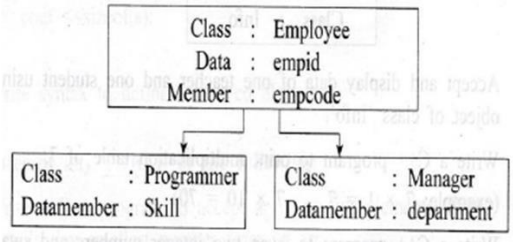
Q8. Write a C++ program to declare a class COLLEGE with members as college code. Derive a new class as STUDENT with members as studid. Accept and display details of student along with college for one object of student.

Q9. Write a C++ program to implement inheritance shown in following figure:



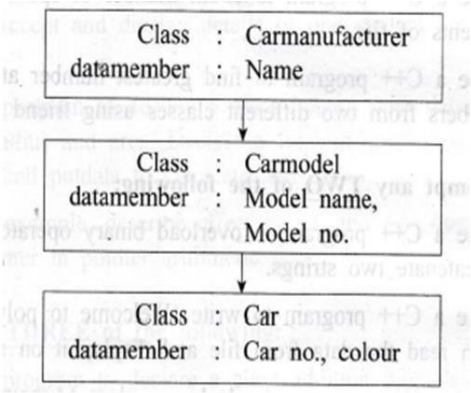
Accept and display data of one teacher and one student using object of class 'Info'
Note: Any other correct logic of multiple inheritance in program shall be considered.

Q10. Write a C++ program to implement following inheritance.



Accept and display data for one programmer and one manager. Make display function virtual.

Q11. Write a C++ program for following multilevel inheritance.



Accept and display data for one car with all details.

Q12. Write a program to implement multiple inheritance as shown in following Figure No.1:

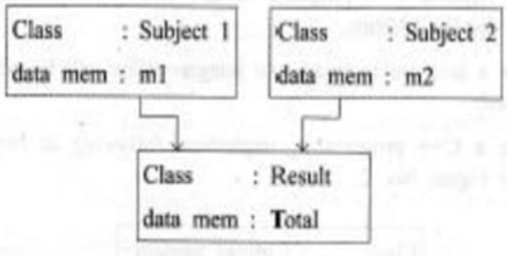
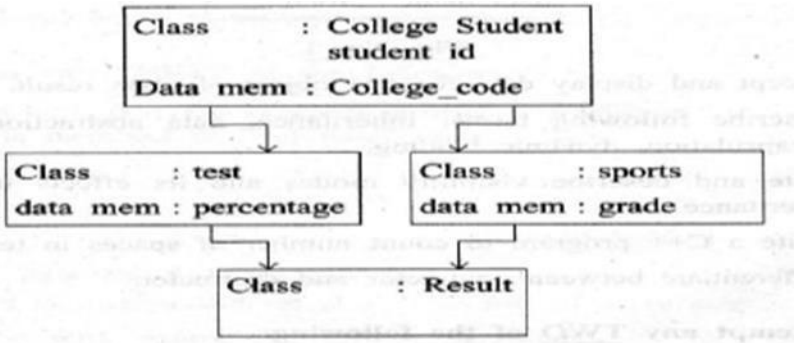


Fig. No. 1

Accept and display data for one object of class result. (Note: Any other relevant logic should be considered).

Q13. Write a C++ program to implement following in heritance.



Accept and display data for one object of class result (Hint: use virtual base class).

Q14. Write a program to implement single inheritance from the following Refer Figure No.1

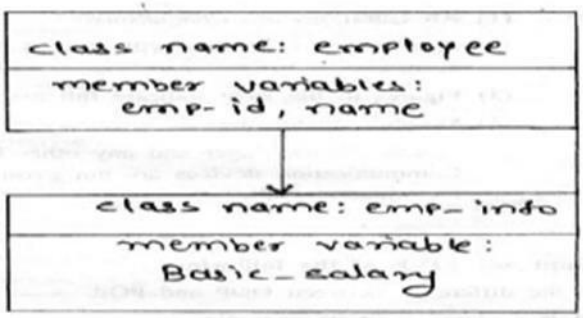


Fig. No. 1

Q15. Write a program to implement the following hierarchy using suitable member functions. Refer Figure No.2.

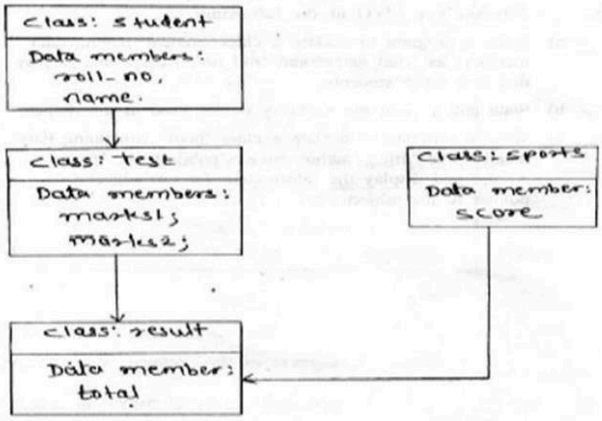


Fig. No. 2

Note: Submit Assignment on or before
14-10-24.