OOP LAB TASK REPORT

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**SINGLE INHERITANCE:**

Single inheritance is defined as the inheritance in which a derived class is inherited from the only one base class. Where 'A' is the base class, and 'B' is the derived class**.**Public makes public members of the base class public in the derived class, and the protected members of the base class remain protected in the derived class.Protected  makes the public and protected members of the base class protected in the derived class.Private Private members are only accessible with in class.

**MULTIPLE INHERITANCE**:

We can derive a class from multiple classes. This means that a derived class can have over one base class. The derived class can directly access the public members.Derived classes will have access to protected and public membersonly.In Protected Visibility Mode, public and protected members of the parent class become protected. And it does not inherit the private members and hence is not accessible directly.In Private Mode . The private data members can only access by their respective classes.

**MULTILEVEL INHERITANCE:**

Multilevel inheritance is performed when class inherits the features of multiple classes. This form of inheritance is known as multilevel inheritance. class C is derived from class B (which is derived from base class A ).In *public mode****,****.*  
When a class is publicly inherited by another class, its public members become the public members of the derived class, its protected members become the protected members of the derived class, while the private members of any class cannot be inherited*.*In *private mode*,When a class is privately inherited by another class, its public members become the private members of the derived class, its protected members become the private members of the derived class, while the private members of any class cannot be inherited*.*In *protected mode*,When a class is inherited by another class its public members become the protected members of the derived class, its protected members become the protected members of the derived class, while the private members of any class cannot be inherited.

**Hybrid Inheritance:**

Hybrid inheritance is implemented by combining more than one type of inheritance is called **hybrid inheritance**. Private members and functions of base, derived class, sub derived class can be accessed by their respective class. Protected members of base class can be accessed by derived class within the class and sub derived class can access the protected members of his parent class. Public members of base and derived class can be accessed in main function with the object of derived class.