Project Name: Library System

Done By: Deepak

The Library System indicated in this project includes classes such as:

- Library
- PhysicalBook
- Author
- ElectronicResource
- LibraryMember
- Guest

Here, the Library class acts as a superclass or a parent class, where the PhysicalBook, ElectronicResource, LibraryMember and Guest class acts as a subclass or a child class. The inheritance concept is required to establish a relationship between different resources of the library, which include PhysicalBook and ElectronicResource. This concept helps in creating a unified catalogue which in turn benefits us in maintaining different resources of the library in a consistent manner. As the library class is a superclass, it can collect various types of resources from various classes. By which we can access and maintain resources in the collection of resources or we can say that we can handle the resources in this catalog in an effective and efficient way. The classes PhysicalBook and ElectronicResource, being subclass, have their own unique specific features and work as their class indicates. The subclass LibraryMember represents library members of the Library who are allowed to borrow books and access the electronic resources. The class LibraryMember inherits from the superclass Library, which allows members to access different types of resources. As stated, the class Guest also acts as a subclass of the class Library(superclass). This class presents guests of the library who have limitations, such as being able to access the library for a maximum of 3 days and are not allowed to borrow books, but can access the electronic resources. To conclude, we can say that inheritance gives a better opportunity to make our work more flexible. It also allows the user to reuse the code as we can make changes to the functions in the superclass from which the subclasses inherit.