REPORT:  
 Acess spicifer private cannot be accessed.

Inheritance is a fundamental concept in object-oriented programming that allows a new class to be based on an existing class. This new class, called a subclass or derived class, inherits the properties and methods of the existing class, called the superclass or base class, and can add or modify its own properties and methods.

Inheritance allows code reuse, simplifies the code structure, and makes it easier to maintain and extend the code. By defining a common interface or behavior in a superclass, subclasses can be created that share the same characteristics while also having their own unique properties and methods.

There are different types of inheritance, such as single inheritance, where a subclass inherits from only one superclass; multiple inheritance, where a subclass inherits from more than one superclass; and hierarchical inheritance, where a superclass has multiple subclasses.

Inheritance also allows for polymorphism, where objects of different subclasses can be treated as objects of the same superclass. This enables the creation of more flexible and extensible code.

However, inheritance can also lead to tight coupling between classes, making it difficult to change the superclass without affecting the subclasses. It can also lead to a complex class hierarchy and increase the size and complexity of the code. Therefore, it is important to use inheritance judiciously and follow best practices to ensure that the code is maintainable and extensible.