**What's inheritance?**

In OOP, inheritance is used to create an “is-a” relationship among classes. it is also known as parent-child relationship, super class – sub class relationship, based class - derived class relationship.

In “is-a” relationship, child class has all of the characteristics of the parent class.

It increases code reusability and it decreases redundancy.

Extends keywords is used to inherit from a parent class.

Java supports single inheritance, multi level inheritance and hierarchical inheritance.

It doesn't support multiple inheritance. However multiple inheritance can be achieved through interfaces by using implements keyword.

All public methods and variables can be inherited.

All protected methods and variables can be inherited.

All default methods and variables can be inherited only if the parent class and child class are in the same package.

However Private methods and variables can not be inherited.

Constructors can not be inherited. But they can be invoked from a child class either by implicitly or by using super keyword.

In inheritance you can override or hide a method of a parent class.

In method overriding child class and parent class method have same name and same parameters.

The access modifier of child class method must be same or more visible and return type of child class method must be same or covariant type.

Super keyword can be used to reach methods and variables of a parent class if they have same name with the child class methods and variables.