* Inheritance with Interview Questions.

Q. — What is Inheritance In Real world?

→ Inheritance means Inhereting the Properties of Parent Class Into Child Class.

→ " Inheritance is the Procedure by which one object Acquires all Properties and behaviours of a Parent class objets.

→ We use " Extends " key word for Inherit one class property into another Class.

Ex :- Class Animal —————— Parent Class
      {
          Void Eat ( )
          {
              S.o.P (" I am Eating ");
          }
      }
      Class.

Class Dog Extends Animal. ———— Child Class
      {
          P.S.V.m ( )
          {
              Dog d = new Dog ( );
              d.Eat ( );
          }
      }

→) Relation Between two Classes are is —) "is A"

→) It means Dog is A Animal

(an)

- Sparrow is A Bird.

↓ Parent class   ↓ Child class.

*) Advantages of Inheritance.

- Code re-usability.
- we can Achieve Polymorphism (method overriding) using Inheritance.

* dis -Advantages.

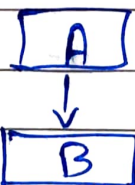→) Here Both Class are tightly coupled. It means Parent Class affect on all child chiclasses. which Extends Parent Class.

* Types of Inheritance.
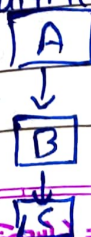
- Single
- Multilevel
- Hierarchical   Support By the Java
- Multiple
- hybrid.   Not Support By java.

- Single

```
┌───┐
│ A │
└───┘
  ↓
┌───┐
│ B │
└───┘
```

- Multilevel.

```
┌───┐
│ A │
└───┘
  ↓
┌───┐
│ B │
└───┘
  ↓
┌───┐
│ C │
└───┘
```

- Hierarchical.

```
┌───┐
│ A │
└───┘
  ┌──┴──┐
┌───┐ ┌───┐
│ B │ │ C │
└───┘ └───┘
```

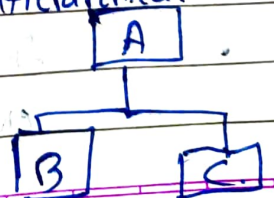– Multiple   – Hybrid
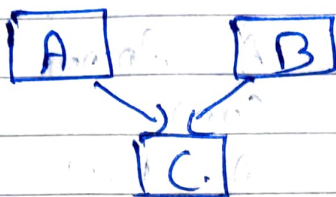

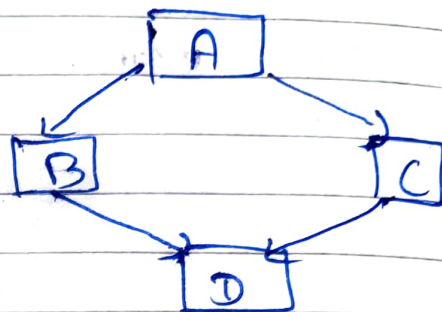d Why multiple Inheritance is not supported by java.

☞   Class A
        {
            Show () {
                }
            }

        Class B {
            show () {
                }

        Class AC Extends B, A {

            P.S.V.m (String [ ] args) {
                C. obj = new (C);
                C. show ();
            confusion ←
            which show methods
                }
            }

→ this types of Error's are known as ambiguity Error.

-) Hybrid Inheritance uses a cost concept of multiple Inheritance. that's why Hybrid Inheritance is also not supported by Java.

-) this type of problem is also aka diamond problem.

* Here if B Extends Class A then

Class A &
     A( ) & (Constructor is not the Part
        y   of Class)
   y

Class B Extends A &
    P.S.V.M (String [] args) &

   y

-) Here not all properties of Class A inherit In Class B

-) It I made Constructor of A then It would not Inherit In class B

-) It I made private method In class A then It would not Inherit In class B

* that means Below does not take Part In Inheritance.

- Constructor :- Because It is not Part of class
- Private method :- Because It is Private.

Imp.
* Every class has Parent Class.

→ Here In above Example Class B has
Parent Class A But Class A also
has Object Class.

Class A extends object
||
y
Class B Extends A र
||
y

→ Every Class Extends some other class.

Q - Which Class is the Parent Class of
all the Classes In Java.

Ans - → Object is the Parent Class of all
the Classes In Java.

Imp-Q - there can be only one Super class
not more than that because Java
does not Support multiple Inheritance.