10/06/2025

>>> INHERITANCE

- extends keyword is used in java for inheritence.

- advantages:

    1. code reusability

    2. modularity

- Types of inheritence

    1. Single Inheritence

        - A single child class inherits from a single parent class.

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    2. Multi Level Inheritence

        - A child class inherits properties from a parent class which inturn inheris from another parent class.

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    3. Hierarchial Inheritence

        - A single parent class is inherited by multiple child classes.

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    4. Multiple Inheritence

        - A child class inheritss from multiple parent classes.

        - In Java it is not possible to implement Multiple Inheritence through classes. So we use interfaces

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        - There will be ambiguity if we implement multiple inheritence using classes

        ex: class B has run() method and class C also has run() method.

        now class A inheris both class B and class C

        lets say class A also has run() method. now this run() has to override the run() in parent class. But there are multiple parent classes with same method signatures. so there will be ambiguity.

        - but this multiple inheritence using classes is possible in C++.

>>> Polymorphism

- it is a core OOP concept.

- "poly" means many,"morph" means forms.

- two types

    1. Compile time (Method OverLoading)

        - Compile time polymorphism or method overloading

        - same name different signature

    2. Run time (Method OverRiding)

        - child classes overrides its parent class methods with same signature

- Advantages:

    1. allows code resusability

    2. makes code more flexible and maintainable

    3. supports extensibility - new classes can be added.

// work

parent RBI class

child classed SBI, ICICI

 methods deposit, withdraw