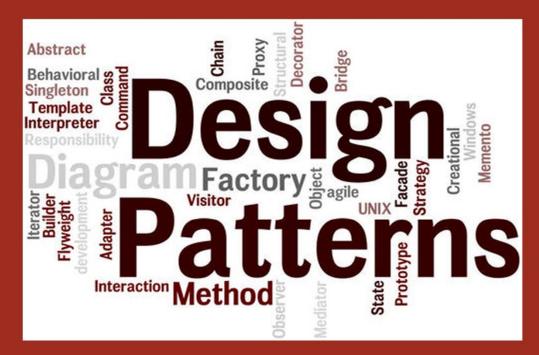
# JAVA means DURGA SOFT

# Design Patterns Core Level Design Patterns

12. IOC (Inversion of Control) or Dependency Injection



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## **JAVA Means DURGA SOFT**

# **IOC (Inversion of Control) or Dependency Injection:**

**Problem: Dependency Look Up** i.e. If the resource of the application spending some time to search and gather its dependent values required in the business logic from the other resource of the application then it is called as Dependency Look Up. In Dependency Look Up resource pulls its dependent values from other resources of the application.

**Ex:** The way we get the JDBC data resource object from JNDI registry comes under Dependency Look Up.

In dependency look up resource cannot used dependent values directly in the business logic. The resource must spend time to search and gather dependent values before utilizing them in business logic.

**Solution:** Use Dependency Injection i.e. if underlying server software or container software or frame work software or JRE or special resource of the application dynamically assigns its dependent to resources then it is called as **Dependency Injection.** 

In Dependency Injection resource can directly use the injected values in business logic without spending time to search and gather them.



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# Ex:

- a) JRE/JVM performs Dependency Injection while instantiating classes using parameterized constructor.
- b) The way ActionServlet writes form data to Form Bean class object comes under Dependency Injection.
- c) Spring container can perform Dependency Injection on Spring beans.
- d) Life cycle methods, Event handling methods cannot perform Dependency Injection because they never give choice to the programmer to pass the explicit data.

**Note:** Dependency Injection might be a design pattern, whereas Inversion of Control is implemented using Dependency Injection. Dependency injection is the main method to implement Inversion of Control.





