SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
Coimbatore - 641035.

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Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Department of Computer Applications

Course Code: 23CAT606

Course Name: Java Programming

Unit IV: Advanced Java Programming

Topic :   Java Bean – Introduction

Java Bean - Introduction

JavaBeans are classes that encapsulate many objects into a single object (the bean). It is a Java class that should follow the following conventions:

1. Must implement Serializable.
2. It should have a public no-arg constructor.
3. All properties in java bean must be private with public getters and setter methods.

Benefit: It is a reusable software component.


Serialization   De-Serialization
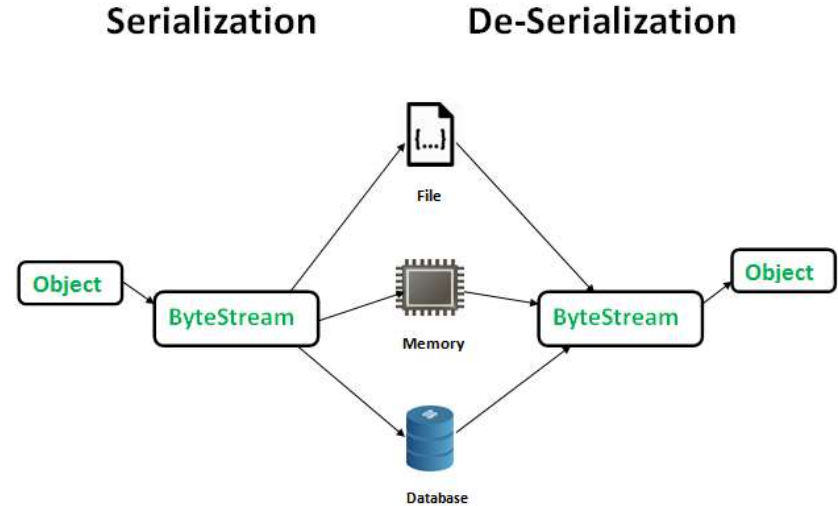
Serialization

1. The byte stream created is platform independent. So, the object serialized on one platform can be deserialized on a different platform.
2. To make a Java object serializable we implement the **java.io.Serializable** interface.
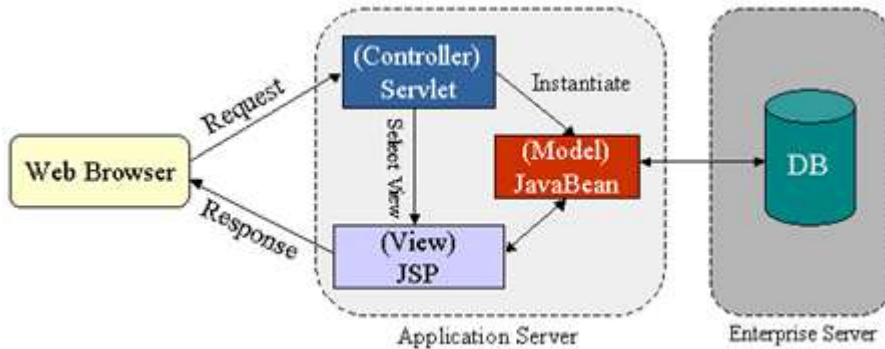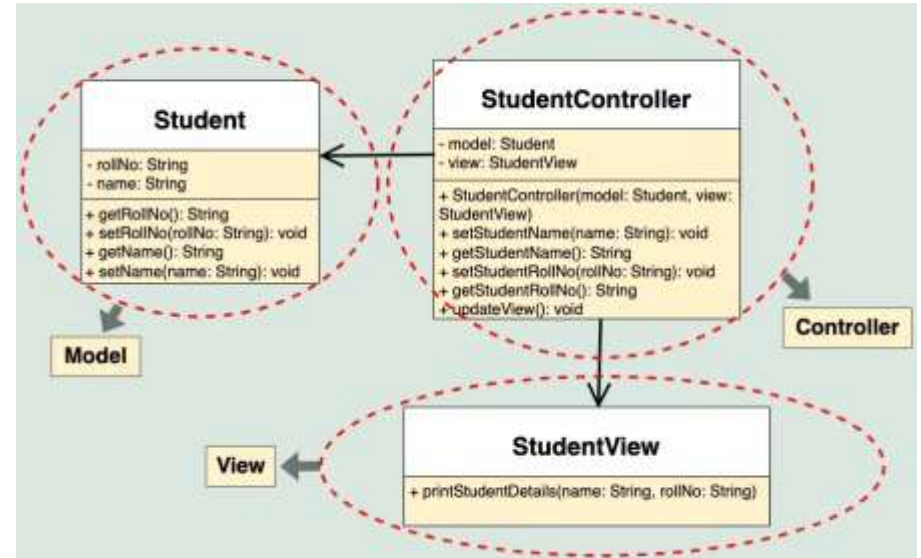
Advantage
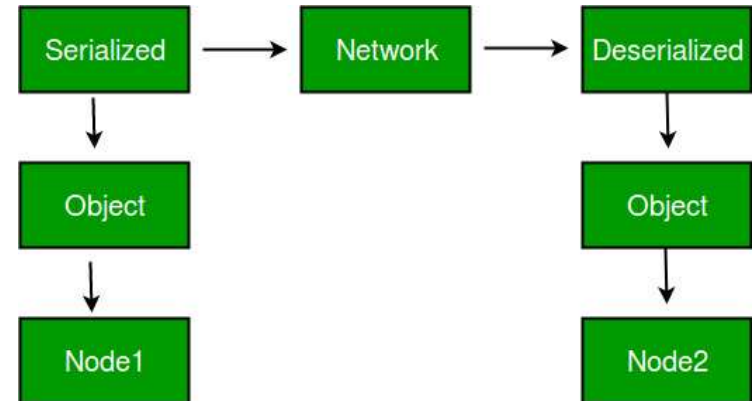
1. To save/persist state of an object.
2. To travel an object across a network.

MVC Framework

MVC Design Pattern
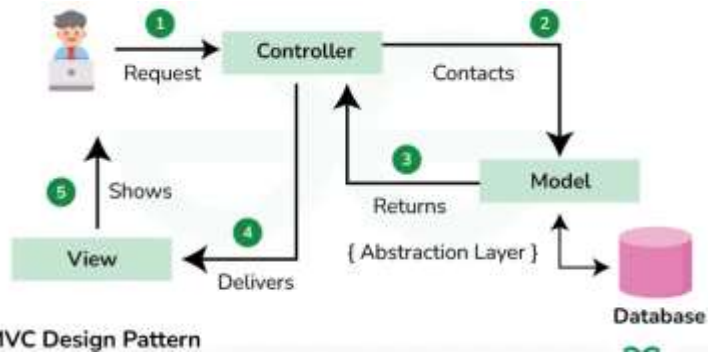
Model   : Handles Data Logic
View   : Handles Data presentation
Controller :Handles Request flow

JavaBean Properties

1. getPropertyName ()

For example, if the property name is firstName, the method name would be getFirstName() to read that property. This method is called the accessor.

2. setPropertyName ()

For example, if the property name is firstName, the method name would be setFirstName() to write that property. This method is called the mutator.

```
public class TestBean {
    private String name;

    public void setName(String name) {
      this.name = name;
    }

    public String getName() { return name; }
}
```

Properties of Getter and Setter

Properties for setter methods:

1.It should be public in nature.

2.The return type a should be void.

3.The setter method should be prefixed with the set.

4.It should take some argument i.e. it should not be a no-arg method.

Properties for getter methods:

1.It should be public in nature.

2.The return type should not be void i.e. according to our requirement, return type we have to give the return type.

3.The getter method should be prefixed with get.

4.It should not take any argument.

Simple program – Java bean

1. package mypack;

2. public class Employee implements java.io.Serializable{

3.   private int id;

4.   private String name;

5.   public Employee(){}

6.   public void setId(int id)

7.   {this.id=id;}

8.   public int getId()

9.   {return id;}

10. public void setName(String name){this.name=name;}

11. public String getName(){return name;}

How to access the JavaBean class?

1.   package mypack;

2.   public class Test{

3.   public static void main(String args[]){

4.   Employee e=new Employee();

5.   e.setName("Arjun");

6.   System.out.println(e.getName());

7.   }}

Reference

1. Herbert Schildt " The Complete Reference Java 2, 8th edition , Tata McGraw Hill, 2011

2. Ralph Bravaco, Shai Simonson, "Java Programming: From the Ground up Tata McGraw Hill, 2012

3. https://www.javatpoint.com

Thank you