

## Creating a Java Bean:

### StudentBean.java

```
import java.io.*;
public class StudentBean implements Serializable{
    private int id;
    private String name;

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

    public int getId() {
        return id;
    }

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

## Accessing Java Bean

### Test.java

```
public class Test {
    public static void main(String[] args) {
        //accessing info from bean
        StudentBean sb=new StudentBean();
        sb.setId(101);
        sb.setName("Ram");
        System.out.println("Id: "+sb.getId());
        System.out.println("Name: "+sb.getName());
    }
}
```

## using PropertyDescriptor)

```
import java.beans.*;
import java.io.Serializable;

//create a property set of Fruit class
class Fruit implements Serializable{
    private String name;
    private double price;

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

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

```

        public void setPrice(double price) {
            this.price=price;
        }

        public double getPrice() {
            return price;
        }
    }

    //Accessing properties using Property Descriptor
    public class BeanExample {
        public static void main(String[] args) throws Exception {

            BeanInfo beanInfo=Introspector.getBeanInfo(Fruit.class);
            PropertyDescriptor pd[]=beanInfo.getPropertyDescriptors();

            System.out.println("Properties:");
            for(int i=0;i<pd.length;i++) {
                System.out.println("\t"+pd[i].getName());
            }

        }
    }

```

### using EventSetDescriptor)

```

import java.beans.*;
import java.io.Serializable;
import java.awt.*;
import java.awt.event.*;

//create a property set of Fruit class
class Fruit extends Canvas implements Serializable{
    //declaring mouse event
    public Fruit() {
        addMouseListener(new MouseAdapter() {
            public void MousePressed(MouseEvent me) {
                //your stuffs on mouse pressed
            }
        });
    }
}

//Accessing properties using Property Descriptor
public class BeanExample {
    public static void main(String[] args) throws Exception {
        BeanInfo beanInfo=Introspector.getBeanInfo(Fruit.class);
        EventSetDescriptor ed[]=beanInfo.getEventSetDescriptors();
        System.out.println("Events:");
        for(int i=0;i<ed.length;i++) {
            System.out.println("\t"+ed[i].getName());
        }
    }
}

```

### using MethodDescriptor)

```
import java.beans.*;
import java.io.Serializable;

//create a property set of Fruit class
class Fruit implements Serializable{
    private String name;
    private double price;

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

    public String getName() {
        return name;
    }

    public void setPrice(double price) {
        this.price=price;
    }

    public double getPrice() {
        return price;
    }
}

//Accessing properties using Property Descriptor
public class BeanExample {
    public static void main(String[] args) throws Exception {
        BeanInfo beanInfo=Introspector.getBeanInfo(Fruit.class);
        MethodDescriptor md[]=beanInfo.getMethodDescriptors();
        System.out.println("Methods:");
        for(int i=0;i<md.length;i++) {
            System.out.println("\t"+md[i].getName());
        }
    }
}
```

### extending SimpleBeanInfo class)

#### Colors.java

```
import java.awt.*;
import java.awt.event.*;
import java.io.Serializable;

public class Colors implements Serializable {
    private int id;
    private String name;

    public void setId(int id) {
        this.id=id;
    }

    public int getId() {
        return id;
    }
}
```

```

    }

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

    public String getName() {
        return name;
    }
}

```

### ColorsBeanInfo.java

```

import java.beans.*;
public class ColorsBeanInfo extends SimpleBeanInfo{
    public PropertyDescriptor[] getPropertyDescriptors() {
        try {
            PropertyDescriptor name=new PropertyDescriptor
                ("name",Colors.class);
            PropertyDescriptor pd[]= {name};
            return pd;
        } catch (Exception ex) {
            System.out.println(ex.toString());
        }
        return null;
    }
}

```

### IntroSpectorDemo.java

```

import java.awt.*;
import java.beans.*;
public class IntroSpectorDemo {
    public static void main(String[] args) throws Exception {
        BeanInfo beanInfo=Introspector.getBeanInfo(Colors.class);
        System.out.println("Properties:");
        PropertyDescriptor pd[]=beanInfo.getPropertyDescriptors();
        for(int i=0;i<pd.length;i++) {
            System.out.println("\t"+pd[i].getName());
        }
    }
}

```