
<JSTORM>

**Writing Enterprise Applications with Java 2
Platform, Enterprise Edition - part5**



JSTORM
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Bonus Calculation

Enter social security Number:

Enter Multiplier:

Social security number retrieved: 777777777

Bonus Amount retrieved: 0.0

Error messages: Duplicate primary key

3 : Duplicate Key Error

bonus.jsp

Session Bean	bonus	JavaBean
bonus.jsp		
	HTML .2	HTML
	bonus.jsp	JSP
가		

```
<HTML>
<BODY BGCOLOR = "WHITE">
<HEAD>
<TITLE>Bonus Calculation</TITLE>
</HEAD>
<BLOCKQUOTE>
<H3>Bonus Calculation</H3>

<!--ACTION parameter calls this page-->
<FORM METHOD="GET" ACTION="bonus.jsp">

<P>
Enter social security Number:
<P>
<INPUT TYPE="TEXT" NAME="SOCSEC"></INPUT>
<P>

Enter Multiplier:
<P>
<INPUT TYPE="TEXT" NAME="MULTIPLIER"></INPUT>
```

```
<P>
<INPUT TYPE="SUBMIT" VALUE="Submit">
<INPUT TYPE="RESET">
</FORM>

<!--Scriptlet and JavaBeans Tags start here-->
<jsp:useBean id = "jbonus" class = "JBonusBean"/>

<%! String sMult, ssec; %>
<%
    sMult = request.getParameter("MULTIPLIER");
    ssec = request.getParameter("SOCSEC");
%>

<jsp:setProperty name = "jbonus" property="strMult" value="<%=sMult%>"/>
<jsp:setProperty name = "jbonus" property="socsec" value="<%=ssec%>"/>

Social security number retrieved:
<jsp:getProperty name="jbonus" property="socsec"/>

<P>
Bonus Amount retrieved:
<jsp:getProperty name="jbonus" property="bonusAmt"/>

<P>
Error messages:
<jsp:getProperty name = "jbonus" property="message"/>

</BLOCKQUOTE>
</BODY>
</HTML>
```

JavaBean

HTML	JavaBean	. id
JavaBean	(alias)	class
JavaBean	.	id jbonus , class
JBonusBean	.	

```
<jsp:useBean id = "jbonus" class = "JBonusBean"/>
```

가

JSP	HTML	input	가
.	sMult	String	ID

```
ssec          String
<%! String sMult, ssec; %>
<%
    sMult = request.getParameter("MULTIPLIER");
    ssec = request.getParameter("SOCSEC");
%>
```

JavaBean

```
HTML          JavaBean  2
JavaBean      private    . 1      jsp:setProperty name
JBonusBean (jbonus      ID      (alias)      )
strMult       sMult      . 2
JBonusBean    socsec
```

```
<jsp:setProperty name = "jbonus" property="strMult" value="<%=sMult%>"/>
<jsp:setProperty name = "jbonus" property="socsec" value="<%=ssec%>"/>
The value="<%=ssec%>" expression sends the data contained in the ssec variable to
the socsec field in the JavaBean.
```

JavaBean

```
JavaBean      , JavaBean
jsp:getProperty name      ,      가
(private      )      .      getProperty name      JBonusBean
private      socsec
```

```
Social security number retrieved:
<jsp:getProperty name="jbonus" property="socsec"/>
```

```
JBonusBean      bonusAmt      message
가
```

```
<P>
Bonus Amount retrieved:
<jsp:getProperty name="jbonus" property="bonusAmt"/>
```

```
<P>
Error messages:
<jsp:getProperty name = "jbonus" property="message"/>
```


JavaBeans

JavaBeans™(bean .) Java™
, JavaBean , JavaBeans
, Bean 가
JavaBeans , JavaBeans
가
4 bonus.jsp , HTML JSP JBonusBean
private
JBonusBean 가 JavaBeans
가
JBonusBean , JSP
JavaBeans technology . JavaBeans technology
, JavaBeans .

<http://java.sun.com/beans/index.html>

JBonusBean .

```
import javax.naming.*;  
import javax.rmi.PortableRemoteObject;  
import Beans.*;
```

```
public class JBonusBean {  
    private String strMult, socsec, message;  
    private double bonusAmt;  
    CalcHome homecalc;  
  
    public JBonusBean() {  
        try{  
            InitialContext ctx = new InitialContext();  
            Object objref = ctx.lookup("calcs");  
            Object objref2 = ctx.lookup("bonus");  
            homecalc = (CalcHome)  
                PortableRemoteObject.narrow(objref, CalcHome.class);  
            homebonus = (BonusHome)  
                PortableRemoteObject.narrow(objref2, BonusHome.class);  
        } catch (javax.naming.NamingException e) {  
            e.printStackTrace();  
        }  
    }  
}
```

```
public double getBonusAmt() {
    if(strMult != null){
        Integer integerMult = new Integer(strMult);
        int multiplier = integerMult.intValue();
        try {
            double bonus = 100.00;
            Calc theCalculation = homecalc.create();
            double calc = theCalculation.calcBonus(multiplier, bonus);
            Bonus theBonus = homebonus.create(calc, socsec);
            Bonus record = homebonus.findByPrimaryKey(socsec);
            bonusAmt = record.getBonus();
            socsec = record.getSocSec();
        } catch (javax.ejb.DuplicateKeyException e) {
            message = e.getMessage();
        } catch (javax.ejb.CreateException e) {
            e.printStackTrace();
        } catch (java.rmi.RemoteException e) {
            e.printStackTrace();
        } catch (javax.ejb.FinderException e) {
            e.printStackTrace();
        }
        return this.bonusAmt;
    } else {
        this.bonusAmt = 0;
        this.message = "None. ";
        return this.bonusAmt;
    }
}

public String getMessage(){
    return this.message;
}

public String getSocsec(){
    return this.socsec;
}

public String getStrMult(){
    return this.strMult;
}

public void setSocsec(String socsec) {
    this.socsec = socsec;
}
public void setStrMult(String strMult){
    this.strMult = strMult;
}
}
```

Bean

```

        get        set
        .
        JavaBean
        .        get        set
        가        private
        JBonusBean        private
        JBonusBean        get<property>        strMult
        socsec        set<property>        가
    
```

```

public class JBonusBean {
    private String strMult, socsec, message;
    private double bonusAmt;
}
    
```

```

JbonusBean        Session Bean
    
```

```

public JBonusBean() {
    try{
        InitialContext ctx = new InitialContext();
        Object objref = ctx.lookup("calcs");
        homecalc = (CalcHome)
            PortableRemoteObject.narrow(objref, CalcHome.class);
    } catch (javax.naming.NamingException e) {
        e.printStackTrace();
    }
}
    
```

Set

```

JBonusBean 2 setter (set ) 가
    . setter (private )
    , JavaBean        private        socsec
setSocsec private strMult        setStrMult 2 setter
    가
        socsec strMult        JSP        setProperty
name        . J2EE        setProperty name
        , JbonusBean (jbonus        id        (alias)
)        set
    
```

```

<jsp:setProperty name = "jbonus" property="strMult" value="<%=sMult%>"/>
<jsp:setProperty name = "jbonus" property="socsec" value="<%=ssec%>"/>
    
```

```

JBonusBean      set<property>                , J2EE
    JSP          JavaBean                    , JSP  setProperty name
                set<Property>                .
setter          , set                        .
    JBonusBean private                      .
                2                          .      , private  socsec
                setSocsec 가                . J2EE
Socsec          socsec                      . setter      void      1
가              .
    
```

```

public void setSocsec(String socsec) {
    this.socsec = socsec;
}
public void setStrMult(String strMult) {
    this.strMult = strMult;
}
    
```

Get

```

JBonusBean      4  getter      (get          ) 가
    . getter      (private      )      . 4  getter
    getBonusAmt, getMessage, getSocsec,   getStrMult , private
bonusAmt , message , socsec , strMult
    bonusAmt  message  가      getBonusAmt
가          . JSP          getProperty name      ,
JBonusBean      가      . JSP
    JBonusBean      가      , JSP
    ..
    
```

```

Social security number retrieved:
<jsp:getProperty name="jbonus" property="socsec"/>
<P>
Bonus Amount retrieved:
<jsp:getProperty name="jbonus" property="bonusAmt"/>
<P>
Error messages:
<jsp:getProperty name = "jbonus" property="message"/>
    
```

```

getter      setter          , JSP      JBonusB
ean      가      . getter      가
가      . getBonusAmt
가      가      .      J2EE
    
```

```
runtime error          this.bonusAmt
.
getBonusAmt           if-else          , strMult
    . JSP
, JSP                 , strMult      null
    bonusAmt         null          . JSP      가 null   bonusAmt   가
    runtime error가   .              , strMult    null
    bonusAmt         0
.

public double getBonusAmt() {
    if(strMult != null){
        Integer integerMult = new Integer(strMult);
        int multiplier = integerMult.intValue();
        try {
            double bonus = 100.00;
            Calc theCalculation = homecalc.create();
            Bonus theBonus = theCalculation.calcBonus(multiplier, bonus, socsec);
            Bonus record = theCalculation.getRecord(socsec);
            bonusAmt = record.getBonus();
            socsec = record.getSocSec();
        } catch (javax.ejb.DuplicateKeyException e) {
            message = e.getMessage();
        } catch (javax.ejb.CreateException e) {
            e.printStackTrace();
        } catch (java.rmi.RemoteException e) {
            e.printStackTrace();
        }
        return this.bonusAmt;
    } else {
        this.bonusAmt = 0;
        this.message = "None. ";
        return this.bonusAmt;
    }
}

public String getMessage(){
    return this.message;
}

public String getSocsec(){
    return this.socsec;
}

public String getStrMult(){
    return this.strMult;
}
}
```

```
public void setSocsec(String socsec) {  
    this.socsec = socsec;  
}  
  
public void setStrMult(String strMult) {  
    this.strMult = strMult;  
}
```

, J2EE , , Cloudscape

```
j2ee -verbose  
deploytool  
cloudscape -start
```

, J2EE

UNIX

```
j2sdkee1.2.1/bin/j2ee _verbose  
j2sdkee1.2.1/bin/deploytool  
j2sdkee1.2.1/bin/cloudscape -start
```

Windows

```
j2sdkee1.2.1\bin\j2ee -verbose  
j2sdkee1.2.1\bin\deploytool  
j2sdkee1.2.1\bin\cloudscape -start
```

WAR

가 , Lesson WAR
, WAR 가 .

Local Application Window :

```
o 2 BonusApp Application Component  
o BonusWar  
o [Edit] [Delete]
```

WAR

[File] :

- o New Web Component .

[Introduction] :

- o [Next >] .

[War File General Properties] :

- o [display name] BonusWar .
- o [Add] .
- o ClientCode bonus.jsp 가 .
- o [Next >] ,ClientCode JBonusBean.class 가 .
- o [Finish] .
- o : JBonusBean.class 가 , bonus.jsp 가 .

[War File General Properties] :

- o [Next >] .

[Choose Component Type] :

- o [JSP Filename] bonus.jsp .
- o [JSP]가 .
- o [Next >] .

[Component General Properties] :

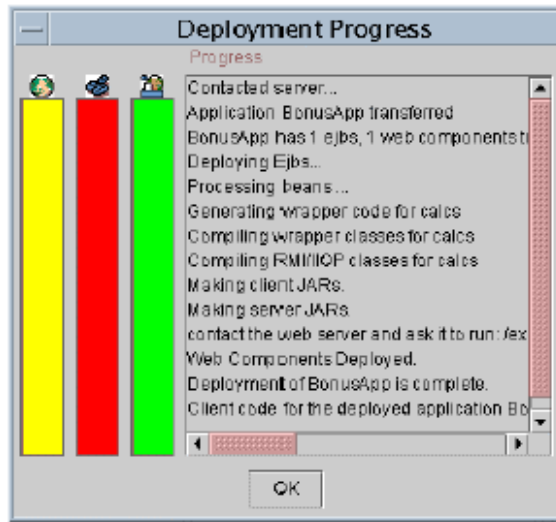
- o BonusJSP .
- o [Finish] .

[Inspecting] :

- o [Web Contents] .
- o JSPRoot .

J2EE

- 가 Enterprise Bean , Verifier . Verifier
compiler 가
- o BonusApp 가 [Tool] [Verifier] .
가 , [OK] .
가 .
- o Verifier 가 .
- : Version 1.2 , tests app.WebURI 가
- o [Tool] [Deploy Application] .
o 가 , J2EE .
- : [Return Client Jar] , .
가 , 가 HTML
JAR .
- o [Next >] . CalcBean JNDI calcs , BonusBean JND
I bonus .
- o [Next >] .
o Context Root JSPRoot .
, JSPRoot .
- o [Next >] .
- o [Finish] 가 가 3
가 4 .
o 가 [OK] .



4 :

J2EE

Web 8000 . bonus.html
<http://localhost:8000/JSPRoot/bonus.html>

- o social security number multiplier .
 - o Submit . bonus.jsp 가 ,
- HTML .

JavaBeans technology

JavaBeans

<http://java.sun.com/beans/index.html>