



BEA WebLogic Workshop™ Help

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EJBs Samples

This section contains source code for the following samples.

Samples Included in This Section

automaticPK Samples

beanManagedPersistence Samples

finderMethods Samples

homeMethods Samples

messageDriven Samples

security Samples

selectMethods Samples

valueObject Samples

automaticPK Samples

This section contains source code for the following samples.

Samples Included in This Section

Customer_APK.ejb Sample

Customer_APK.ejb Sample

This topic includes the source code for the Customer_APK.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/automaticPK/

Sample Source Code

```
package automaticPK;

import javax.ejb.*;
import weblogic.ejb.*;

/**
 * @ejbgen:automatic-key-generation cache-size="1" name="NamedSequence"
 *   type="NamedSequenceTable"
 *
 * @ejbgen:entity default-transaction="Supports" prim-key-class="java.lang.Integer"
 *   ejb-name="Customer_APK"
 *   data-source-name="cgSampleDataSource"
 *   table-name="ejb_customer"
 *   abstract-schema-name = "Customer"
 *
 * @ejbgen:jndi-name
 *   local="ejb.AutomaticPK_CustomerLocalHome"
 *
 * @ejbgen:file-generation local-class = "True" local-class-name="AutomaticPK_CustomerLocal" local-class-package="automaticPK"
 *
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from Customer as o WHERE o.lastName = ?1" generate-c
 */
public abstract class Customer_APK extends GenericEntityBean implements EntityBean
{

    /**
     * @ejbgen:cmp-field column="FirstName"
     * @ejbgen:local-method
     */
    public abstract String getFirstName();

    /**
     * @ejbgen:local-method
     */
    public abstract void setFirstName(String arg);

    /**
     * @ejbgen:cmp-field column="LastName"
     * @ejbgen:local-method
     */
    public abstract String getLastName();

    /**
     * @ejbgen:local-method
     */
}
```

navEJBs.html Sample

```
public abstract void setLastName(String arg);

/**
 * @ejbgen:cmp-field primkey-field="true" column="Customer_ID"
 * @ejbgen:local-method
 */
public abstract Integer getCustomer_ID();

/**
 * @ejbgen:local-method
 */
public abstract void setCustomer_ID(Integer arg);

/**
 * This method
 */
public java.lang.Integer ejbCreate(java.lang.String FirstName, java.lang.String LastName)
{
    setFirstName(FirstName);
    setLastName(LastName);

    return null; // FIXME return PK value
}

public void ejbPostCreate(java.lang.String FirstName, java.lang.String LastName)
{
}
}
```


beanManagedPersistence Samples

This section contains source code for the following samples.

Samples Included in This Section

BMPItemBean.ejb Sample

BMPItemBean.ejb Sample

This topic includes the source code for the BMPItemBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/beanManagedPersistence/

Sample Source Code

```
package beanManagedPersistence;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;
import java.util.Collection;
import javax.ejb.*;
import javax.naming.Context;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import javax.sql.DataSource;
import weblogic.ejb.*;

/**
 * @ejbgen:entity default-transaction="Supports"
 *   ejb-name = "BMPItem"
 *   persistence-type="bmp"
 *   prim-key-class="java.lang.Integer"
 *
 * @ejbgen:jndi-name
 *   local = "ejb.BMPItemLocalHome"
 *
 * @ejbgen:file-generation local-class = "True" local-class-name = "BMPItem" local-home = "True"
 *
 * @ejbgen:resource-ref jndi-name="cgSampleDataSource" sharing-scope="Shareable" auth="Container"
 */
public class BMPItemBean
    extends GenericEntityBean
    implements EntityBean
{
    private Integer itemNumber;
    private String itemName;
    private double price;
    private EntityContext theContext;

    public Integer ejbCreate(Integer number, String name, double pr)
        throws CreateException {

        itemNumber = number;
        itemName = name;
        price = pr;

        Connection con = null;
```

navEJBs.html Sample

```
PreparedStatement ps = null;
try {
    Context ic = new InitialContext();
    DataSource ds = (DataSource)ic.lookup("java:comp/env/jdbc/cgSampleDataSource");
    con = ds.getConnection();
    ps = con.prepareStatement("INSERT INTO WebLogic.EJB_BMPItem (number, name, price) val
    ps.setInt(1, number.intValue());
    ps.setString(2, name);
    ps.setDouble(3, pr);
    if (ps.executeUpdate() != 1) {
        throw new CreateException ("Failure to add item the database");
    }
    return number;
}
catch(NamingException ne) {
    throw new EJBException (ne);
}
catch(SQLException se) {
    throw new EJBException (se);
}
finally {
    try {
        if(ps != null)
            ps.close();
        if(con!= null)
            con.close();
    }
    catch(SQLException se) {
        se.printStackTrace();
    }
}
}

public void ejbPostCreate(Integer number, String name, double pr) { }

public Integer ejbFindByPrimaryKey(Integer pk) throws FinderException {
    Connection con = null;
    PreparedStatement ps = null;
    ResultSet result = null;
    try {
        Context ic = new InitialContext();
        DataSource ds = (DataSource)ic.lookup("java:comp/env/jdbc/cgSampleDataSource");
        con = ds.getConnection();
        ps = con.prepareStatement("SELECT number FROM EJB_BMPItem WHERE number = ?");
        ps.setInt(1, pk.intValue());
        result = ps.executeQuery();
        if(!result.next()) {
            throw new ObjectNotFoundException("Cannot find item with number " + pk);
        }
    }
    catch(NamingException ne) {
        throw new EJBException (ne);
    }
    catch (SQLException se) {
        throw new EJBException(se);
    }
    finally {
        try {
            if(result != null)
                result.close();
            if(ps != null)
                ps.close();
        }
    }
}
```

```

        ps.close();
        if(con!= null)
            con.close();
    }
    catch(SQLException se){
        se.printStackTrace();
    }
}
return pk;
}

/**
 * @ejbgen:local-home-method
 */
public Collection ejbFindByPrice(double pr) throws FinderException {
    Connection con = null;
    PreparedStatement ps = null;
    ResultSet result = null;
    try {
        Context ic = new InitialContext();
        DataSource ds = (DataSource)ic.lookup("java:comp/env/jdbc/cgSampleDataSource");
        con = ds.getConnection();
        ps = con.prepareStatement("SELECT number from EJB_BMPItem WHERE name = ?");
        ps.setDouble(1,pr);
        result = ps.executeQuery();
        ArrayList aList = new ArrayList();
        while(result.next()) {
            aList.add(result.getObject("number"));
        }
        return aList;
    }
    catch(NamingException ne) {
        throw new EJBException (ne);
    }
    catch (SQLException se) {
        throw new EJBException (se);
    }
    finally {
        try {
            if(result != null)
                result.close();
            if(ps != null)
                ps.close();
            if(con!= null)
                con.close();
        }
        catch(SQLException se) {
            se.printStackTrace();
        }
    }
}

/**
 * @ejbgen:local-method
 */
public Integer getItemNumber() {
    return itemNumber;
}

/**
 * @ejbgen:local-method
 */

```

navEJBs.html Sample

```
public void setItemNumber(Integer number) {
    itemNumber = number;
}

/**
 * @ejbgen:local-method
 */
public String getItemName() {
    return itemName;
}
/**
 * @ejbgen:local-method
 */
public void setItemName(String name) {
    itemName = name;
}

/**
 * @ejbgen:local-method
 */
public double getPrice() {
    return price;
}
/**
 * @ejbgen:local-method
 */
public void setPrice(double pr) {
    price = pr;
}

public void setEntityContext(EntityContext ctx) {
    theContext = ctx;
}

public void unsetEntityContext() {
    theContext = null;
}

public void ejbLoad() {
    Integer thePK = (Integer)theContext.getPrimaryKey();
    Connection con = null;
    PreparedStatement ps = null;
    ResultSet result = null;
    try {
        Context ic = new InitialContext();
        DataSource ds = (DataSource)ic.lookup("java:comp/env/jdbc/cgSampleDataSource");
        con = ds.getConnection();
        ps = con.prepareStatement("SELECT name, price FROM EJB_BMPItem WHERE number = ?");
        ps.setInt(1, thePK.intValue());
        result = ps.executeQuery();
        if(result.next()){
            itemNumber = thePK;
            itemName = result.getString("name");
            price = result.getDouble("price");
        }
        else {
            throw new EJBException();
        }
    }
    catch(NamingException ne) {
        throw new EJBException (ne);
    }
}
```

```

    }
    catch(SQLException se) {
        throw new EJBException(se);
    }
    finally {
        try {
            if (result != null)
                result.close();
            if (ps != null)
                ps.close();
            if (con != null)
                con.close();
        }
        catch(SQLException se) {
            se.printStackTrace();
        }
    }
}

public void ejbStore() {
    Connection con = null;
    PreparedStatement ps = null;
    try {
        Context ic = new InitialContext();
        DataSource ds = (DataSource)ic.lookup("java:comp/env/jdbc/cgSampleDataSource");
        con = ds.getConnection();
        ps = con.prepareStatement("UPDATE EJB_BMPItem SET name = ?, price = ? WHERE number = ?");
        ps.setString(1,itemName);
        ps.setDouble(2,price);
        ps.setInt(3,itemNumber.intValue());
        if(ps.executeUpdate() != 1) {
            throw new EJBException("ejbStore unable to store latest settings in table.");
        }
    }
    catch(NamingException ne) {
        throw new EJBException (ne);
    }
    catch(SQLException se) {
        throw new EJBException(se);
    }
    finally {
        try {
            if(ps != null)
                ps.close();
            if(con != null)
                con.close();
        }
        catch(SQLException se) {
            se.printStackTrace();
        }
    }
}

public void ejbRemove() {
    Connection con = null;
    PreparedStatement ps = null;
    try {
        Context ic = new InitialContext();
        DataSource ds = (DataSource)ic.lookup("java:comp/env/jdbc/cgSampleDataSource");
        con = ds.getConnection();
        ps = con.prepareStatement("DELETE FROM EJB_BMPItem WHERE number = ?");
    }

```

navEJBs.html Sample

```
        ps.setInt(1, itemNumber.intValue());
        if(ps.executeUpdate() != 1) {
            throw new EJBException("ejbRemove unable to remove the entity bean");
        }
    }
    catch(NamingException ne) {
        throw new EJBException (ne);
    }
    catch(SQLException se) {
        throw new EJBException (se);
    }
    finally {
        try {
            if(ps != null)
                ps.close();
            if(con!= null)
                con.close();
        }
        catch(SQLException se) {
            se.printStackTrace();
        }
    }
}
}
```

finderMethods Samples

This section contains source code for the following samples.

Samples Included in This Section

ItemsBean_F.ejb Sample

ManufacturerBean_F.ejb Sample

ItemsBean_F.ejb Sample

This topic includes the source code for the ItemsBean_F.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/finderMethods/

Sample Source Code

```
package finderMethods;

import java.util.Collection;
import javax.ejb.CreateException;
import weblogic.ejb.GenericEntityBean;

/**
 * @ejbgen:entity default-transaction="Supports" concurrency-strategy="ReadOnly"
 *   ejb-name="ItemsBean_F"
 *   data-source-name = "cgSampleDataSource"
 *   table-name="EJB_ITEMS"
 *   prim-key-class = "java.lang.Integer"
 *
 * @ejbgen:jndi-name
 *   local="ejb.ItemsBean_FHome"
 *
 * @ejbgen:file-generation local-class = "true" local-class-name="Items_F" local-home = "true"
 * @ejbgen:relation role-name="ItemsBean_Fs-have-ManufacturerBean_F" fk-column="MANUFACTURER" o
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from ItemsBean_F as o WHERE o.itemname = ?1" generat
 * @ejbgen:finder ejb-ql="SELECT OBJECT(i) from ManufacturerBean_F as o, IN(o.items) AS i WHERE
 * @ejbgen:finder weblogic-ejb-ql="SELECT OBJECT(i) from ManufacturerBean_F as o, IN(o.items) A
 * @ejbgen:finder generate-on="Local" ejb-ql="SELECT OBJECT(o) from ItemsBean_F as o" signature
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from ItemsBean_F as o WHERE o.price > ?1 AND o.quant
 * @ejbgen:finder weblogic-ejb-ql="SELECT OBJECT(o) from ItemsBean_F as o WHERE o.price > (SELE
 * @ejbgen:finder weblogic-ejb-ql="SELECT OBJECT(mainItem) from ItemsBean_F as mainItem WHERE 5
 * @ejbgen:finder weblogic-ejb-ql="SELECT OBJECT(mainItem) from ItemsBean_F as mainItem WHERE N
 */

public abstract class ItemsBean_F extends GenericEntityBean
{

    /**
     * @ejbgen:cmp-field column = "ITEMNUMBER"
     *   primkey-field="true"
     * @ejbgen:local-method
     */
    public abstract Integer getItemnumber();
    /**
     * @ejbgen:local-method
     */
    public abstract void setItemnumber(Integer val);

    /**
     * @ejbgen:cmp-field column = "ITEMNAME"

```

navEJBs.html Sample

```
* @ejbgen:local-method
*/
public abstract String getItemname();
/**
 * @ejbgen:local-method
 */
public abstract void setItemname(String val);

/**
 * @ejbgen:cmp-field column = "PRICE"
 * @ejbgen:local-method
 */
public abstract double getPrice();
/**
 * @ejbgen:local-method
 */
public abstract void setPrice(double val);

/**
 * @ejbgen:cmp-field column = "QUANTITYAVAILABLE"
 * @ejbgen:local-method
 */
public abstract int getQuantityavailable();
/**
 * @ejbgen:local-method
 */
public abstract void setQuantityavailable(int val);

public java.lang.Integer ejbCreate(java.lang.Integer Itemnumber)
{
    setItemnumber(Itemnumber);

    return null; // FIXME return PK value
}

public void ejbPostCreate(java.lang.Integer Itemnumber)
{
}

/**
 * @ejbgen:cmr-field
 * @ejbgen:local-method
 */
public abstract ManufacturerBean_FLocal getManufacturer();

/**
 * @ejbgen:local-method
 */
public abstract void setManufacturer(ManufacturerBean_FLocal arg);

/**
 * @ejbgen:local-method
 */
public String toString()
{
    return "["+getItemnumber().toString()+", "+getItemname()+", "+getPrice()+", "+getQuantitya
}
}
```

ManufacturerBean_F.ejb Sample

This topic includes the source code for the ManufacturerBean_F.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/finderMethods/

Sample Source Code

```
package finderMethods;

import java.util.Collection;
import javax.ejb.CreateException;

import weblogic.ejb.GenericEntityBean;

/**
 * @ejbgen:entity default-transaction="Supports" concurrency-strategy="Database"
 *   ejb-name = "ManufacturerBean_F"
 *   data-source-name = "cgSampleDataSource"
 *   table-name = "EJB_MANUFACTURER"
 *   prim-key-class = "java.lang.Integer"
 *
 * @ejbgen:jndi-name
 *   local = "ejb.ManufacturerBean_FHome"
 *
 * @ejbgen:file-generation local-class = "true" local-class-name = "ManufacturerBean_FLocal" local-
 * @ejbgen:relation role-name="ManufacturerBean_F-has-ItemsBean_Fs" cmr-field="items" target-ejb=
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from ManufacturerBean_F as o" generate-on="Local" si
 * @ejbgen:finder ejb-ql="SELECT OBJECT(m) from ItemsBean_F as o, IN(o.manufacturer) AS m" gene
 * @ejbgen:finder ejb-ql="SELECT DISTINCT OBJECT(m) from ItemsBean_F as o, IN(o.manufacturer) A
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from ManufacturerBean_F as o WHERE o.usManufacturer
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from ManufacturerBean_F as o WHERE o.items IS EMPTY"
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from ManufacturerBean_F as o, IN (o.items) AS allIt
 */

public abstract class ManufacturerBean_F
    extends GenericEntityBean
{

    /**
     * @ejbgen:cmp-field ordering-number="10" column = "MANUFACTURER_ID"
     *   primkey-field="true"
     * @ejbgen:local-method
     */
    public abstract Integer getManufacturerId();

    /**
     * @ejbgen:local-method
     */
    public abstract void setManufacturerId(Integer val);

    /**
     * @ejbgen:cmp-field column = "MANUFACTURERNAME"

```

navEJBs.html Sample

```
* @ejbgen:local-method
*/
public abstract String getManufacturername();
/**
 * @ejbgen:local-method
 */
public abstract void setManufacturername(String val);

/**
 * @ejbgen:cmp-field column = "US_MANUFACTURER"
 * @ejbgen:local-method
 */
public abstract int getUsManufacturer();
/**
 * @ejbgen:local-method
 */
public abstract void setUsManufacturer(int val);

/**
 * @ejbgen:cmr-field
 * @ejbgen:local-method
 */
public abstract java.util.Collection.getItems();

/**
 * @ejbgen:local-method
 */
public abstract void setItems(java.util.Collection arg);

/**
 * @ejbgen:local-method
 */
public java.lang.String toString()
{
    return "["+getManufacturerId().toString()+","+"getManufacturername()+","+"getUsManufacturer()
}

public java.lang.Integer ejbCreate(java.lang.Integer ManufacturerId, java.lang.String Manufacturername)
{
    setManufacturerId(ManufacturerId);
    setManufacturername(Manufacturername);
    setUsManufacturer(UsManufacturer);

    return null; // FIXME return PK value
}

public void ejbPostCreate(java.lang.Integer ManufacturerId, java.lang.String Manufacturername)
{
}
}
```

homeMethods Samples

This section contains source code for the following samples.

Samples Included in This Section

ItemsBean_H.ejb Sample

ItemsBean_H.ejb Sample

This topic includes the source code for the ItemsBean_H.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/homeMethods/

Sample Source Code

```
package homeMethods;

import java.text.DecimalFormat;
import java.util.Collection;
import java.util.Iterator;
import javax.ejb.CreateException;
import javax.ejb.FinderException;
import weblogic.ejb.GenericEntityBean;

/**
 * @ejbgen:entity default-transaction="Supports" concurrency-strategy="ReadOnly"
 *   ejb-name="ItemsBean_H"
 *   data-source-name = "cgSampleDataSource"
 *   table-name="EJB_ITEMS"
 *   prim-key-class = "java.lang.Integer"
 *
 * @ejbgen:jndi-name
 *   local="ejb.ItemsBean_HHome"
 *
 * @ejbgen:file-generation local-class = "true" local-class-name="Items_H" local-home = "true"
 */

public abstract class ItemsBean_H extends GenericEntityBean
{

    /**
     * @ejbgen:cmp-field column = "ITEMNUMBER"
     *   primkey-field="true"
     * @ejbgen:local-method
     */
    public abstract Integer getItemnumber();

    /**
     * @ejbgen:local-method
     */
    public abstract void setItemnumber(Integer val);

    /**
     * @ejbgen:cmp-field column = "ITEMNAME"
     * @ejbgen:local-method
     */
    public abstract String getItemname();

    /**
     * @ejbgen:local-method
     */
}
```

navEJBs.html Sample

```
public abstract void setItemname(String val);

/**
 * @ejbgen:cmp-field column = "PRICE"
 * @ejbgen:local-method
 */
public abstract double getPrice();
/**
 * @ejbgen:local-method
 */
public abstract void setPrice(double val);

/**
 * @ejbgen:cmp-field column = "QUANTITYAVAILABLE"
 * @ejbgen:local-method
 */
public abstract int getQuantityavailable();
/**
 * @ejbgen:local-method
 */
public abstract void setQuantityavailable(int val);

/**
 * @ejbgen:local-home-method
 */
public int ejbHomeGetNumberOfExpensiveItems(double price)
{
    try {
        Collection expensiveItems = ejbSelectExpensiveItems(price);
        return expensiveItems.size();
    }
    catch(FinderException fe) {
        return -1;
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeGetAverageExpensiveItems(double price)
{
    try {
        Collection expensiveItems = ejbSelectExpensiveItems(price);
        Iterator expensiveIterator = expensiveItems.iterator();
        double sum = 0;
        while (expensiveIterator.hasNext()) {
            Items_H anItem = (Items_H)expensiveIterator.next();
            sum += anItem.getPrice();
        }
        // Format average to two digits after decimal
        DecimalFormat myFormatter = new DecimalFormat("##.##");
        return myFormatter.format((sum/expensiveItems.size()));
    }
    catch(FinderException fe) {
        return "-1.0";
    }
}

/**
```

navEJBs.html Sample

```
* @ejbgen:local-home-method
*/
public boolean ejbHomeGetExpensiveItemsInStock(double price)
{
    try {
        Collection expensiveItems = ejbSelectExpensiveItems(price);
        Iterator expensiveIterator = expensiveItems.iterator();
        double sum = 0;
        while (expensiveIterator.hasNext()) {
            Items_H anItem = (Items_H)expensiveIterator.next();
            if(anItem.getQuantityavailable() > 0)
                return true;
        }
        return false;
    }
    catch(FinderException fe) {
        return false;
    }
}

/**
 * @ejbgen:select ejb-ql="SELECT OBJECT(o) from ItemsBean_H as o WHERE o.price > ?1"
 */
public abstract java.util.Collection ejbSelectExpensiveItems(double price) throws FinderEx

public java.lang.Integer ejbCreate(java.lang.Integer Itemnumber)
{
    setItemnumber(Itemnumber);

    return null; // FIXME return PK value
}

public void ejbPostCreate(java.lang.Integer Itemnumber)
{
}
}
```


messageDriven Samples

This section contains source code for the following samples.

Samples Included in This Section

AddViaQMDBean.ejb Sample

AddViaQMDBean_Dup.ejb Sample

AddViaTopicMDBean.ejb Sample

AddViaTopicMDBean_Dup.ejb Sample

DeleteViaQMDBean.ejb Sample

FacadeBean.ejb Sample

SimpleTokenBean.ejb Sample

AddViaQMDBean.ejb Sample

This topic includes the source code for the AddViaQMDBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import java.util.Date;
import javax.ejb.*;
import javax.jms.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * This Message-Driven Bean listens to the queue jms/SamplesAppMDBQ
 * for messages with the message selector "Command = 'Add'", and creates
 * a new token, using the entity bean SimpleTokenBean.
 *
 * @ejbgen:message-driven default-transaction="NotSupported"
 *   message-selector="Command = 'Add'"
 *   max-beans-in-free-pool="2"
 *   ejb-name = AddViaQMD
 *   destination-jndi-name = jms/SamplesAppMDBQ
 *   destination-type = "javax.jms.Queue"
 *
 * @ejbgen:ejb-local-ref link="SimpleToken_M"
 */
public class AddViaQMDBean
    extends GenericMessageDrivenBean
    implements MessageDrivenBean, MessageListener
{
    private SimpleTokenHome_M tokenHome;
    private String MDBname;
    private int objectHash;

    public void ejbCreate() {
        MDBname = this.getClass().getName();
        objectHash = this.hashCode();
        try {
            javax.naming.Context ic = new InitialContext();
            tokenHome = (SimpleTokenHome_M)ic.lookup("java:/comp/env/ejb/SimpleToken_M");
        }
        catch(NamingException ne) {
            System.out.println("Encountered the following naming exception: " + ne.getMessage());
        }
    }

    public void onMessage(Message msg) {
        try {
```

navEJBs.html Sample

```
MapMessage aMsg = (MapMessage)msg;
int tokenName = Integer.parseInt(aMsg.getString("tokenName"));
tokenHome.create(tokenName,(new Date(System.currentTimeMillis()).toLocaleString()),MDBN
Thread.sleep(1000);
}
catch(Exception e) {
    System.out.println("Encountered the following exception: " + e.getMessage());
}
}
}
```

AddViaQMDBean_Dup.ejb Sample

This topic includes the source code for the AddViaQMDBean_Dup.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import java.util.Date;
import javax.ejb.*;
import javax.jms.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * This Message-Driven Bean listens to the queue jms/SamplesAppMDBQ
 * for messages with the message selector "Command = 'Add'", and creates
 * a new token, using the entity bean SimpleTokenBean.
 *
 * @ejbgen:message-driven default-transaction="NotSupported"
 *   message-selector="Command = 'Add'"
 *   max-beans-in-free-pool="2"
 *   ejb-name = AddViaQMD_Dup
 *   destination-jndi-name = jms/SamplesAppMDBQ
 *   destination-type = "javax.jms.Queue"
 *
 * @ejbgen:ejb-local-ref link="SimpleToken_M"
 */
public class AddViaQMDBean_Dup extends GenericMessageDrivenBean implements MessageDrivenBean, M
{
    private SimpleTokenHome_M tokenHome;
    private String MDBname;
    private int objectHash;

    public void ejbCreate() {
        MDBname = this.getClass().getName();
        objectHash = this.hashCode();
        try {
            javax.naming.Context ic = new InitialContext();
            tokenHome = (SimpleTokenHome_M)ic.lookup("java:/comp/env/ejb/SimpleToken_M");
        }
        catch(NamingException ne) {
            System.out.println("Encountered the following naming exception: " + ne.getMessage());
        }
    }

    public void onMessage(Message msg) {
        try {
            MapMessage aMsg = (MapMessage)msg;
            int tokenName = Integer.parseInt(aMsg.getString("tokenName"));

```

navEJBs.html Sample

```
        tokenHome.create(tokenName,(new Date(System.currentTimeMillis()).toLocaleString()),MDBn
        Thread.sleep(1000);
    }
    catch(Exception e) {
        System.out.println("Encountered the following exception: " + e.getMessage());
    }
}
}
```

AddViaTopicMDBean.ejb Sample

This topic includes the source code for the AddViaTopicMDBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import java.util.Date;
import javax.ejb.*;
import javax.jms.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * This Message-Driven Bean listens to the topic jms/SamplesAppMDBTopic
 * and creates a new token, using the entity bean SimpleTokenBean.

 * @ejbgen:message-driven default-transaction="NotSupported" max-beans-in-free-pool="2"
 *   ejb-name = AddViaTopicMD
 *   destination-jndi-name = jms/SamplesAppMDBTopic
 *   destination-type="javax.jms.Topic"
 *
 *   @ejbgen:ejb-local-ref link="SimpleToken_M"
 */
public class AddViaTopicMDBean
    extends GenericMessageDrivenBean
    implements MessageDrivenBean, MessageListener
{
    private SimpleTokenHome_M tokenHome;
    private String MDBname;
    private int objectHash;

    public void ejbCreate() {
        MDBname = this.getClass().getName();
        objectHash = this.hashCode();
        try {
            javax.naming.Context ic = new InitialContext();
            tokenHome = (SimpleTokenHome_M)ic.lookup("java:/comp/env/ejb/SimpleToken_M");
        }
        catch(NamingException ne) {
            System.out.println("Encountered the following naming exception: " + ne.getMessage());
        }
    }

    public void onMessage(Message msg) {
        try {
            TextMessage aMsg = (TextMessage)msg;
            int tokenName = Integer.parseInt(aMsg.getText());
            tokenHome.create(tokenName, (new Date(System.currentTimeMillis()).toLocaleString()), MDBname);
        }
    }
}
```

navEJBs.html Sample

```
        Thread.sleep(1000);
    }
    catch(Exception e) {
        System.out.println("Encountered the following exception: " + e.getMessage());
    }
}
}
```

AddViaTopicMDBean_Dup.ejb Sample

This topic includes the source code for the AddViaTopicMDBean_Dup.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import java.util.Date;
import javax.ejb.*;
import javax.jms.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * This Message-Driven Bean listens to the topic jms/SamplesAppMDBTopic
 * and creates a new token, using the entity bean SimpleTokenBean.
 *
 * @ejbgen:message-driven default-transaction="NotSupported" max-beans-in-free-pool="2"
 *   ejb-name = AddViaTopicMD_Dup
 *   destination-jndi-name = jms/SamplesAppMDBTopic
 *   destination-type="javax.jms.Topic"
 *
 * @ejbgen:ejb-local-ref link="SimpleToken_M"
 */
public class AddViaTopicMDBean_Dup extends GenericMessageDrivenBean implements MessageDrivenBean
{
    private SimpleTokenHome_M tokenHome;
    private String MDBname;
    private int objectHash;

    public void ejbCreate() {
        MDBname = this.getClass().getName();
        objectHash = this.hashCode();
        try {
            javax.naming.Context ic = new InitialContext();
            tokenHome = (SimpleTokenHome_M)ic.lookup("java:/comp/env/ejb/SimpleToken_M");
        }
        catch(NamingException ne) {
            System.out.println("Encountered the following naming exception: " + ne.getMessage());
        }
    }

    public void onMessage(Message msg) {
        try {
            TextMessage aMsg = (TextMessage)msg;
            int tokenName = Integer.parseInt(aMsg.getText());
            tokenHome.create(tokenName, (new Date(System.currentTimeMillis()).toLocaleString()), MDBname);
            Thread.sleep(1000);
        }
    }
}
```


navEJBs.html Sample

```
        catch(Exception e) {  
            System.out.println("Encountered the following exception: " + e.getMessage());  
        }  
    }  
}
```

DeleteViaQMDBean.ejb Sample

This topic includes the source code for the DeleteViaQMDBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import java.util.Collection;
import java.util.Iterator;
import javax.ejb.*;
import javax.jms.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * This Message-Driven Bean listens to the queue jms/SamplesAppMDBQ
 * for messages with the message selector "Command = 'Delete'", and creates
 * all tokens, using the entity bean SimpleTokenBean.
 */
@ejbgen:message-driven default-transaction="NotSupported"
    message-selector="Command = 'Delete'"
    ejb-name = DeleteViaQMD
    destination-jndi-name = jms/SamplesAppMDBQ
    destination-type = javax.jms.Queue
@ejbgen:ejb-local-ref link="SimpleToken_M"
/

public class DeleteViaQMDBean
    extends GenericMessageDrivenBean
    implements MessageDrivenBean, MessageListener
{
    private SimpleTokenHome_M tokenHome;

    public void ejbCreate() {
        try {
            javax.naming.Context ic = new InitialContext();
            tokenHome = (SimpleTokenHome_M)ic.lookup("java:/comp/env/ejb/SimpleToken_M");
        }
        catch(NamingException ne) {
            System.out.println("Encountered the following naming exception: " + ne.getMessage());
        }
    }

    public void onMessage(Message msg) {
        try {
            Iterator allIter = tokenHome.findAll().iterator();
            while(allIter.hasNext()) {
                ((SimpleToken_M) allIter.next()).remove();
            }
        }
    }
}
```

navEJBs.html Sample

```
    }  
    catch(Exception e) {  
        System.out.println("Encountered the following exception: " + e.getMessage());  
    }  
}  
}
```

FacadeBean.ejb Sample

This topic includes the source code for the FacadeBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import java.util.ArrayList;
import java.util.Collection;
import java.util.Iterator;
import javax.ejb.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * @ejbgen:session default-transaction="Supports"
 *   ejb-name="Facade_M"
 *
 * @ejbgen:jndi-name local="ejb.FacadeLocalHome_M"
 *
 * @ejbgen:ejb-local-ref link="SimpleToken_M"
 *
 * @ejbgen:file-generation remote-class="false" remote-class-name = "Facade" remote-home="false"
 */
public class FacadeBean
    extends GenericSessionBean
    implements SessionBean
{
    private SimpleTokenHome_M tokenHome;
    private SimpleToken_M token;
    private Iterator tokenIter;

    public void ejbCreate() {
        try {
            javax.naming.Context ic = new InitialContext();
            tokenHome = (SimpleTokenHome_M)ic.lookup("java:/comp/env/ejb/SimpleToken_M");
        }
        catch(NamingException ne) {
            System.out.println("Encountered the following naming exception: " + ne.getMessage());
        }
    }

    /**
     * @ejbgen:local-method
     */
    public Collection findAllTokens() throws FinderException
    {
        Collection allTokensVO = new ArrayList();
        tokenIter = tokenHome.findAll().iterator();
    }
}
```

navEJBs.html Sample

```
        while(tokenIter.hasNext()) {
            token = (SimpleToken_M) tokenIter.next();
            allTokensVO.add(new SimpleTokenValue(token.getDate(),token.getEnteredByClass(),token.getEnteredByDate()));
        }
        return allTokensVO;
    }

    /**
     * @ejbgen:local-method
     */
    public Collection findAllTokensOrdered() throws FinderException
    {
        Collection allTokensVO = new ArrayList();
        tokenIter = tokenHome.findAllOrdered().iterator();
        while(tokenIter.hasNext()) {
            token = (SimpleToken_M) tokenIter.next();
            allTokensVO.add(new SimpleTokenValue(token.getDate(),token.getEnteredByClass(),token.getEnteredByDate()));
        }
        return allTokensVO;
    }
}
```

SimpleTokenBean.ejb Sample

This topic includes the source code for the SimpleTokenBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/messageDriven/

Sample Source Code

```
package messageDriven;

import javax.ejb.*;
import weblogic.ejb.*;

/**
 * @ejbgen:entity default-transaction="Supports" prim-key-class="messageDriven.SimpleTokenBeanP
 *   ejb-name="SimpleToken_M"
 *   data-source-name="cgSampleDataSource"
 *   table-name="ejb_simpletoken"
 *   abstract-schema-name = "SimpleToken"
 *
 * @ejbgen:jndi-name
 *   local="ejb.SimpleTokenLocalHome_M"
 *
 * @ejbgen:file-generation local-class = "True" local-class-name="SimpleToken_M" local-home = "
 *
 * @ejbgen:finder ejb-ql="SELECT OBJECT(o) from SimpleToken as o" generate-on="Local" signature
 * @ejbgen:finder weblogic-ejb-ql="SELECT OBJECT(o) from SimpleToken as o ORDERBY o.name" ejb-q
 */
abstract public class SimpleTokenBean
    extends GenericEntityBean
    implements EntityBean
{
    /**
     * @ejbgen:cmp-field primkey-field="true" column="Name"
     * @ejbgen:local-method
     */
    public abstract int getName();

    /**
     * @ejbgen:local-method
     */
    public abstract void setName(int arg);

    /**
     * @ejbgen:cmp-field primkey-field="true" column="Date"
     * @ejbgen:local-method
     */
    public abstract String getDate();

    /**
     * @ejbgen:local-method
     */
    public abstract void setDate(String arg);
}
```

navEJBs.html Sample

```
/**
 * @ejbgen:cmp-field primkey-field="true" column="EnteredByClass"
 * @ejbgen:local-method
 */
public abstract String getEnteredByClass();

/**
 * @ejbgen:local-method
 */
public abstract void setEnteredByClass(String arg);

/**
 * @ejbgen:cmp-field primkey-field="true" column="ObjectHash"
 * @ejbgen:local-method
 */
public abstract int getObjectHash();

/**
 * @ejbgen:local-method
 */
public abstract void setObjectHash(int arg);

public messageDriven.SimpleTokenBeanPK ejbCreate(int Name, java.lang.String Date, java.lang
{
    setName(Name);
    setDate(Date);
    setEnteredByClass(EnteredByClass);
    setObjectHash(ObjectHash);

    return null; // FIXME return PK value
}

public void ejbPostCreate(int Name, java.lang.String Date, java.lang.String EnteredByClass,
{
}
}
```

security Samples

This section contains source code for the following samples.

Samples Included in This Section

InvokedBean.ejb Sample

RoleCheckerBean.ejb Sample

InvokedBean.ejb Sample

This topic includes the source code for the InvokedBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/security/

Sample Source Code

```
package security;

import javax.ejb.*;
import weblogic.ejb.*;

/**
 * @ejbgen:session default-transaction="Supports"
 *   ejb-name = "Invoked"
 *
 * @ejbgen:jndi-name local="ejb.InvokedLocal"
 *
 * @ejbgen:file-generation remote-class="false" remote-class-name = "Invoked" remote-home="false"
 *
 * @ejbgen:security-role-ref role-link="manager" role-name="manager"
 * @ejbgen:security-role-ref role-link="engineer" role-name="engineer"
 */
public class InvokedBean
    extends GenericSessionBean
    implements SessionBean
{
    private javax.ejb.SessionContext context;

    public void ejbCreate() {
        // Your code here
    }

    public void setSessionContext(SessionContext ctx) {
        context = ctx;
    }

    /**
     * @ejbgen:local-method
     */
    public String discoverRole()
    {
        if(context.isCallerInRole("manager")) {
            return "You are a manager";
        }
        else if(context.isCallerInRole("engineer")) {
            return "You are an engineer";
        }
        else {
            return "I cannot determine your security role";
        }
    }
}
```

```
}  
}
```

RoleCheckerBean.ejb Sample

This topic includes the source code for the RoleCheckerBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/security/

Sample Source Code

```
package security;

import javax.ejb.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * @ejbgen:session run-as-identity-principal="weblogic" default-transaction="Supports" use-call
 *   ejb-name = "RoleChecker"
 *
 * @ejbgen:jndi-name local="ejb.RoleCheckerLocalHome"
 * @ejbgen:file-generation remote-class="false" remote-class-name = "RoleChecker" remote-home="
 *
 * @ejbgen:ejb-local-ref link="Invoked"
 *
 * @ejbgen:security-role-ref role-link="manager" role-name="manager"
 * @ejbgen:security-role-ref role-link="engineer" role-name="engineer"
 * @ejbgen:role-mapping global-role="true" role-name="manager"
 * @ejbgen:role-mapping principals="weblogic, engineer" role-name="engineer"
 * @ejbgen:role-mapping principals="ceo" role-name="ceo"
 */
public class RoleCheckerBean
    extends GenericSessionBean
    implements SessionBean
{
    private javax.ejb.SessionContext context;
    private InvokedLocalHome invokedHome;

    public void ejbCreate() {
        try {
            javax.naming.Context ic = new InitialContext();
            invokedHome = (InvokedLocalHome)ic.lookup("java:comp/env/ejb/Invoked");
        }
        catch (NamingException ne) {
            throw new EJBException(ne);
        }
    }

    public void setSessionContext(SessionContext ctx) {
        context = ctx;
    }

    /**
     * @ejbgen:local-method
```

navEJBs.html Sample

```
    */
    public String discoverCallerRole()
    {

        if(context.isCallerInRole("manager")) {
            return "You are a manager";
        }
        else if(context.isCallerInRole("engineer")) {
            return "You are an engineer";
        }
        else {
            return "I cannot determine your security role";
        }
    }

    /**
     * @ejbgen:local-method roles="ceo"
     */
    public String ceoOnly()
    {
        return "You are a CEO";
    }

    /**
     * @ejbgen:local-method roles="manager"
     */
    public String managerOnly()
    {
        return "You are a manager";
    }

    /**
     * @ejbgen:local-method
     */
    public String discoverRoleCheckersRole()
    {
        InvokedLocal invokedEJB;

        try {
            invokedEJB = invokedHome.create();
            return invokedEJB.discoverRole();
        }
        catch(CreateException ce) {
            return "invokedEJB instance could not be created";
        }
    }
}
```

selectMethods Samples

This section contains source code for the following samples.

Samples Included in This Section

ItemsBean_S.ejb Sample

ManufacturerBean_S.ejb Sample

ItemsBean_S.ejb Sample

This topic includes the source code for the ItemsBean_S.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/selectMethods/

Sample Source Code

```
package selectMethods;

import java.sql.ResultSet;
import java.sql.SQLException;
import java.text.DecimalFormat;
import java.util.Collection;
import javax.ejb.CreateException;
import javax.ejb.FinderException;
import weblogic.ejb.GenericEntityBean;

/**
 * @ejbgen:entity default-transaction="Supports" concurrency-strategy="ReadOnly"
 *   ejb-name="ItemsBean_S"
 *   data-source-name = "cgSampleDataSource"
 *   table-name="EJB_ITEMS"
 *   prim-key-class = "java.lang.Integer"
 *
 * @ejbgen:jndi-name
 *   local="ejb.ItemsBean_SHome"
 *
 * @ejbgen:file-generation local-class = "true" local-class-name="Items_S" local-home = "true"
 * @ejbgen:relation role-name="ItemsBean_Ss-have-ManufacturerBean_S" fk-column="MANUFACTURER" c
 */

public abstract class ItemsBean_S extends GenericEntityBean
{

    /**
     * @ejbgen:cmp-field column = "ITEMNUMBER"
     *   primkey-field="true"
     * @ejbgen:local-method
     */
    public abstract Integer getItemnumber();

    /**
     * @ejbgen:local-method
     */
    public abstract void setItemnumber(Integer val);

    /**
     * @ejbgen:cmp-field column = "ITEMNAME"
     * @ejbgen:local-method
     */
    public abstract String getItemname();

    /**
     * @ejbgen:local-method
```

navEJBs.html Sample

```
*/
public abstract void setItemname(String val);

/**
 * @ejbgen:cmp-field column = "PRICE"
 * @ejbgen:local-method
 */
public abstract double getPrice();
/**
 * @ejbgen:local-method
 */
public abstract void setPrice(double val);

/**
 * @ejbgen:cmp-field column = "QUANTITYAVAILABLE"
 * @ejbgen:local-method
 */
public abstract int getQuantityavailable();
/**
 * @ejbgen:local-method
 */
public abstract void setQuantityavailable(int val);

/**
 * @ejbgen:select ejb-ql="SELECT OBJECT(o) from ItemsBean_S as o"
 */
public abstract java.util.Collection ejbSelectAll() throws FinderException;

/**
 * @ejbgen:select ejb-ql="SELECT o.itemname from ItemsBean_S as o"
 */
public abstract java.util.Collection ejbSelectItemNames() throws FinderException;

/**
 * @ejbgen:select weblogic-ejb-ql="SELECT o.itemname from ItemsBean_S as o ORDERBY o.price"
 */
public abstract java.util.Collection ejbSelectItemNamesOrdered() throws FinderException;

/**
 * @ejbgen:select ejb-ql="SELECT o.itemname from ItemsBean_S as o WHERE o.price > ?1"
 */
public abstract java.util.Collection ejbSelectNameByPrice(double price) throws FinderException;

/**
 * @ejbgen:select ejb-ql="SELECT i.itemname from ManufacturerBean_S as o, IN(o.items) AS i"
 */
public abstract java.util.Collection ejbSelectByUSManufacturer() throws FinderException;

/**
 * @ejbgen:select ejb-ql="SELECT o.itemname from ItemsBean_S as o WHERE o.itemnumber = ?1"
 */
public abstract java.lang.String ejbSelectByPrimaryKey(java.lang.Integer itemnumber) throws FinderException;

/**
 * @ejbgen:select weblogic-ejb-ql="SELECT o.itemname, o.quantityavailable from ItemsBean_S"
 */
public abstract java.sql.ResultSet ejbSelectNameQuantity() throws FinderException;

/**
 * @ejbgen:select weblogic-ejb-ql="SELECT o.manufacturer.manufacturername, COUNT(o.itemnumber)"
```

navEJBs.html Sample

```
*/
public abstract java.sql.ResultSet  ejbSelectManufacturerPriceN() throws FinderException;

public java.lang.Integer ejbCreate(java.lang.Integer Itemnumber)
{
    setItemnumber(Itemnumber);

    return null; // FIXME return PK value
}

public void ejbPostCreate(java.lang.Integer Itemnumber)
{
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectAll()
{
    try {
        Collection Items = ejbSelectAll();
        return Items.toString();
    }
    catch(FinderException fe) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectNameByPrice(double price)
{
    try {
        Collection Items = ejbSelectNameByPrice(price);
        return Items.toString();
    }
    catch(FinderException fe) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectByPrimaryKey(int itemnumber)
{
    try {
        return ejbSelectByPrimaryKey(new Integer(itemnumber));
    }
    catch(FinderException fe) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectByUSManufacturer()
{
    try {
```


navEJBs.html Sample

```
        Collection Items = ejbSelectByUSManufacturer();
        return Items.toString();
    }
    catch(FinderException fe) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectItemNames()
{
    try {
        Collection Items = ejbSelectItemNames();
        return Items.toString();
    }
    catch(FinderException fe) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectItemNamesOrdered()
{
    try {
        Collection Items = ejbSelectItemNamesOrdered();
        return Items.toString();
    }
    catch(FinderException fe) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectNameQuantity()
{
    String outcome = "";
    try {
        ResultSet Items = ejbSelectNameQuantity();
        while(Items.next()) {
            outcome += "["+Items.getString("itemname")+",""+Items.getString("quantityavailable")+"";
        }
        return outcome;
    }
    catch(FinderException fe) {
        return "null";
    }
    catch(SQLException se) {
        return "null";
    }
}

/**
 * @ejbgen:local-home-method
 */
public String ejbHomeSelectManufacturerPriceN()
```

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```
{
    // Format average to two digits after decimal
    String outcome = "";
    String price = "";
    try {
        ResultSet Items = ejbSelectManufacturerPriceN();
        while(Items.next()) {
            price = Items.getString(3);
            outcome += "["+Items.getString(1)+","+Items.getString(2)+","+price.substring(0,
            }
            return outcome;
        }
        catch(FinderException fe) {
            return "null";
        }
        catch(SQLException se) {
            return "null";
        }
    }
}

/**
 * @ejbgen:local-method
 */
public String toString()
{
    return "["+getItemnumber().toString()+","+getItemname()+","+getItemPrice()+","+getItemQuantity()
}

/**
 * @ejbgen:cmr-field
 * @ejbgen:local-method
 */
public abstract ManufacturerBean_SLocal getManufacturer();

/**
 * @ejbgen:local-method
 */
public abstract void setManufacturer(ManufacturerBean_SLocal arg);
}
```

ManufacturerBean_S.ejb Sample

This topic includes the source code for the ManufacturerBean_S.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/selectMethods/

Sample Source Code

```
package selectMethods;

import java.util.Collection;
import javax.ejb.CreateException;

import weblogic.ejb.GenericEntityBean;

/**
 * @ejbgen:entity default-transaction="Supports"
 *   ejb-name = "ManufacturerBean_S"
 *   data-source-name = "cgSampleDataSource"
 *   table-name = "EJB_MANUFACTURER"
 *   prim-key-class = "java.lang.Integer"
 *
 * @ejbgen:jndi-name
 *   local = "ejb.ManufacturerBean_SHome"
 *
 * @ejbgen:file-generation local-class = "true" local-class-name = "ManufacturerBean_SLocal" local-package = "selectMethods"
 * @ejbgen:relation role-name="ManufacturerBean_S-has-ItemsBean_Ss" cmr-field="items" target-ejb="ItemsBean_S"
 */

public abstract class ManufacturerBean_S
    extends GenericEntityBean
{

    public java.lang.Integer ejbCreate(Integer manufacturerId)
        throws CreateException
    {
        setManufacturerId(manufacturerId);

        return null;
    }

    public void ejbPostCreate(Integer manufacturerId)
        throws CreateException
    {}

    /**
     * @ejbgen:cmp-field ordering-number="10" column = "MANUFACTURER_ID"
     *   primkey-field="true"
     * @ejbgen:local-method
     */
    public abstract Integer getManufacturerId();
}
```

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```
* @ejbgen:local-method
*/
public abstract void setManufacturerId(Integer val);

/**
 * @ejbgen:cmp-field column = "MANUFACTURERNAME"
 * @ejbgen:local-method
 */
public abstract String getManufacturername();
/**
 * @ejbgen:local-method
 */
public abstract void setManufacturername(String val);

/**
 * @ejbgen:cmp-field column = "US_MANUFACTURER"
 * @ejbgen:local-method
 */
public abstract int getUsManufacturer();
/**
 * @ejbgen:local-method
 */
public abstract void setUsManufacturer(int val);

/**
 * @ejbgen:cmr-field
 * @ejbgen:local-method
 */
public abstract java.util.Collection.getItems();

/**
 * @ejbgen:local-method
 */
public abstract void setItems(java.util.Collection arg);
}
```

valueObject Samples

This section contains source code for the following samples.

Samples Included in This Section

AdminBean.ejb Sample

AdminBean.ejb Sample

This topic includes the source code for the AdminBean.ejb Sample.

Sample Location

This sample is located in the following directory in your WebLogic Workshop installation:

BEA_HOME/weblogic81/samples/workshop/SamplesApp/EJBs/valueObject/

Sample Source Code

```
package valueObject;

import finderMethods.*;
import java.rmi.RemoteException;
import java.util.ArrayList;
import java.util.Collection;
import java.util.Iterator;
import javax.ejb.*;
import javax.naming.InitialContext;
import javax.naming.NamingException;
import weblogic.ejb.*;

/**
 * @ejbgen:session default-transaction="Supports"
 *   ejb-name = "Admin"
 *
 * @ejbgen:jndi-name
 *   remote = "ejb.AdminRemoteHome"
 *
 * @ejbgen:file-generation remote-class = "true" remote-class-name = "Admin" remote-home = "true"
 * @ejbgen:ejb-local-ref link="ManufacturerBean_F"
 * @ejbgen:value-object reference="Value"
 */
public class AdminBean
    extends GenericSessionBean
    implements SessionBean
{
    private ManufacturerBean_FHome manuHome;

    public void ejbCreate() {
        try{
            javax.naming.Context ic = new InitialContext();
            manuHome = (ManufacturerBean_FHome)ic.lookup("java:comp/env/ejb/ManufacturerBean_F");
        }
        catch(NamingException ne) {
            throw new EJBException(ne);
        }
    }

    /**
     * This method receives a ManufacturerVO and uses the contained information
     * to create a new manufacturer.
     * @ejbgen:remote-method
     */
}
```

navEJBs.html Sample

```
public void addManufacturerVO(ManufacturerVO mVO)
{
    try {
        manuHome.create(mVO.getManufacturerId(),mVO.getManufacturername(), mVO.getUsManufactur
    }
    catch (CreateException ce) {
        throw new EJBException(ce);
    }
}

/**
 * This method returns all knows manufacturers as a collection of manufacturerVOs.
 * The information specied in the CMR field items is not entered in the VO, because
 * this information is not necessary in the page flow.
 * @ejbgen:remote-method
 */
public Collection getManufacturersVO()
{
    ManufacturerBean_FLocal manufacturer;
    ManufacturerVO mVO;
    ArrayList items = new ArrayList();

    try{
        Iterator manuIter = manuHome.findAll().iterator();
        while (manuIter.hasNext()) {
            manufacturer = (ManufacturerBean_FLocal) manuIter.next();
            mVO = new ManufacturerVO(null,manufacturer.getManufacturerId(), manufacturer.getManu
            items.add(mVO);
        }
        return items;
    }
    catch(FinderException fe) {
        throw new EJBException(fe);
    }
}

/**
 * This method returns a ManufacturerVO with all fields specified for the manufacturer.
 * The related entity beans 'items' are in turn represented as a collection of
 * value objects in ManufacturerVO.
 * @ejbgen:remote-method
 */
public ManufacturerVO getManufacturer(Integer PK)
{
    ManufacturerBean_FLocal manufacturer;
    ManufacturerVO mVO;
    Collection itemsVO;
    Iterator itemsIter;
    Items_F oneItem;

    try {
        manufacturer = manuHome.findByPrimaryKey(PK);
        itemsIter = manufacturer.getItems().iterator();
        itemsVO = new ArrayList();
        while(itemsIter.hasNext()) {
            oneItem = (Items_F) itemsIter.next();
            itemsVO.add(new ItemVO(oneItem.getItemname(), oneItem.getItemnumber(), null, oneIt
        }
        mVO = new ManufacturerVO(itemsVO,manufacturer.getManufacturerId(), manufacturer.getMa
        return mVO;
    }
}
```

navEJBs.html Sample

```
        catch(FinderException fe) {  
            throw new EJBException(fe);  
        }  
    }  
}
```