


New EJB Project

Select an EJB Version.

Select the EJB spec version for the project you want to create.



☐ Create 1.1 EJB Project.

Create an EJB Project according to the EJB 1.1 specification.

☒ Create 2.0 EJB Project.

Create an EJB Project according to the EJB 2.0 specification.

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Finish

Cancel

New EJB Project

EJB Project

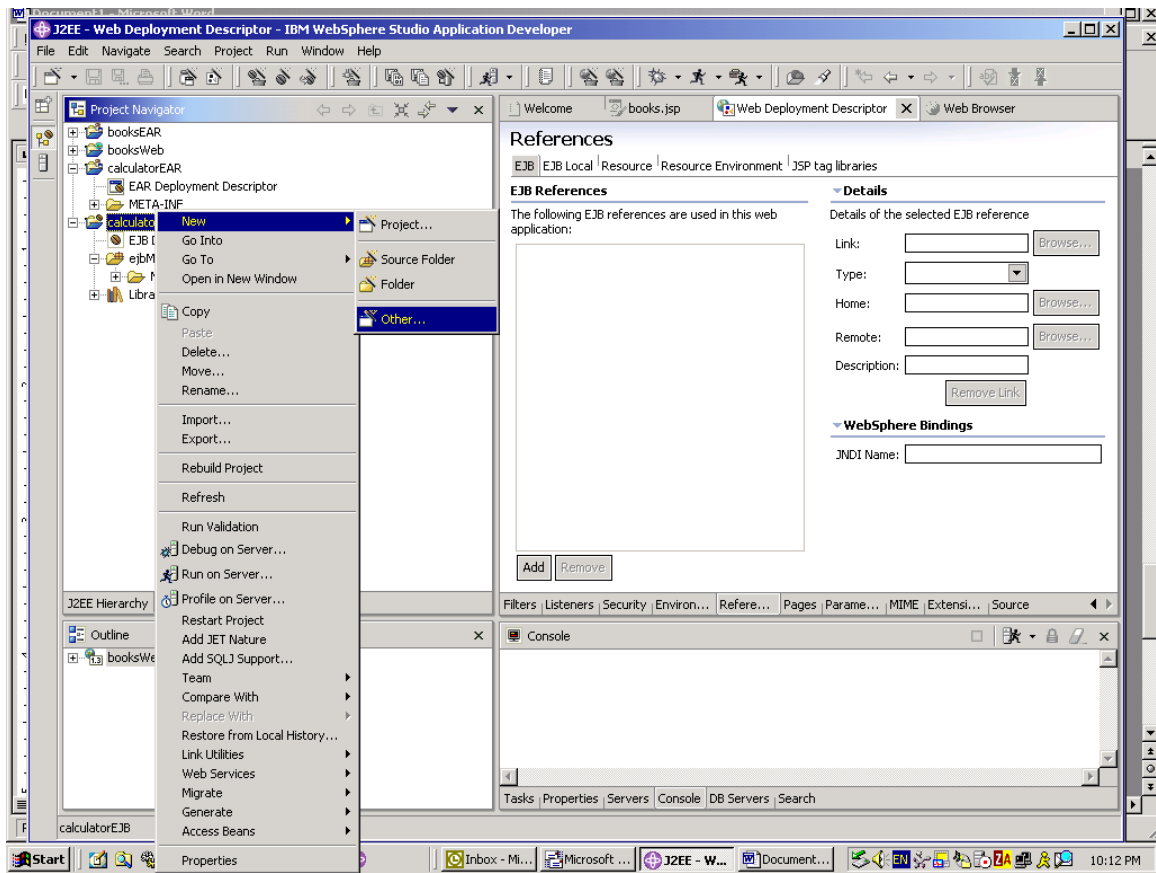
Create an EJB Project and add it to a new or existing Enterprise Application project.

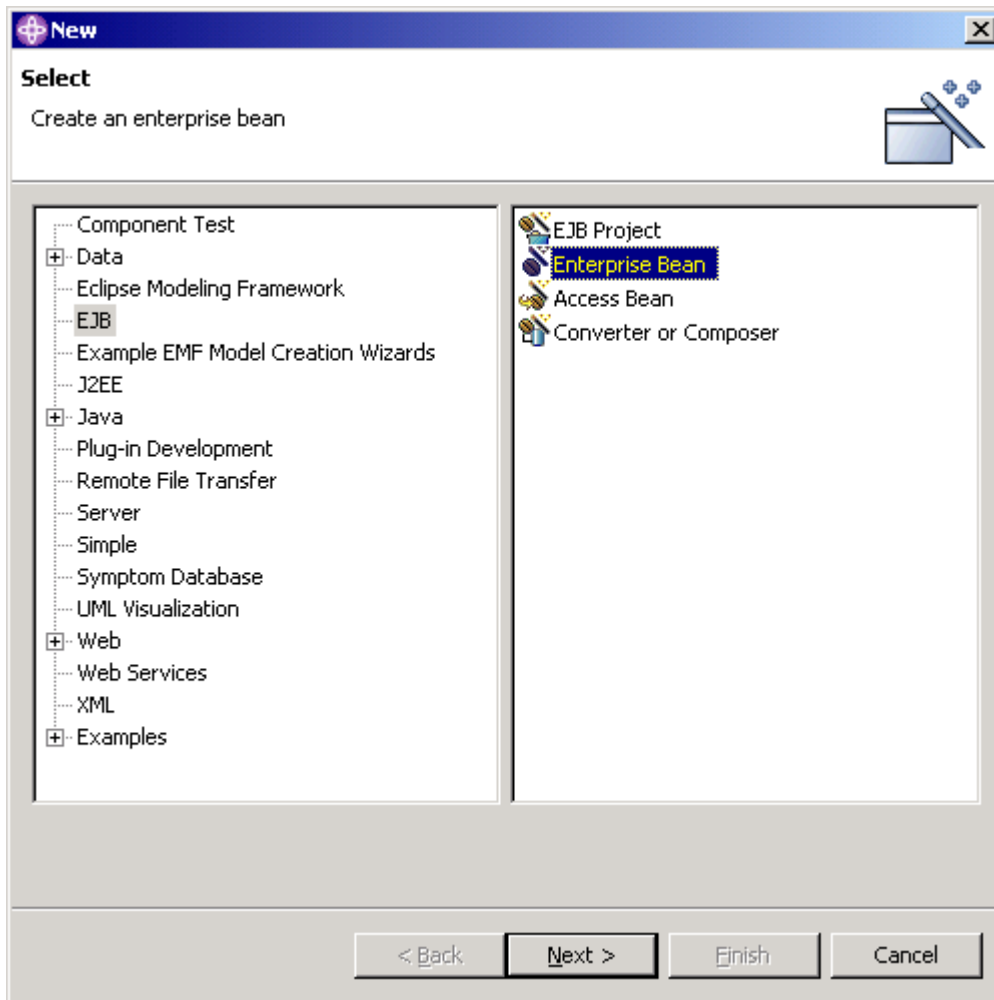
Project name:

Project location:

EAR project

Finish






New Enterprise Bean

×

Select

Create an Enterprise Bean



Select an EJB project to create an EJB 1.1 or an EJB 2.0 enterprise bean.

EJB project: calculatorEJB

▼

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Create an Enterprise Bean

Create a 2.0 Enterprise Bean

Select the EJB 2.0 type and the basic properties of the bean.

☐ Message-driven bean

☒ Session bean

☐ Entity bean with bean-managed persistence (BMP) fields

☐ Entity bean with container-managed persistence (CMP) fields

☐ CMP 1.1 Bean ☐ CMP 2.0 Bean

EJB project: calculatorEJB

Bean name:

Source folder:

Default package:

Change to Statefull and shorten binding

Create an Enterprise Bean

Enterprise Bean Details

Select the session type, transaction type, supertype and Java classes for the EJB 2.0 session bean.

Session type:
☒ Stateful ☐ Stateless

Transaction type:
☒ Container ☐ Bean

Bean supertype:

Bean class:

EJB binding name:

☐ Local client view

Local home interface:

Local interface:

☒ Remote client view

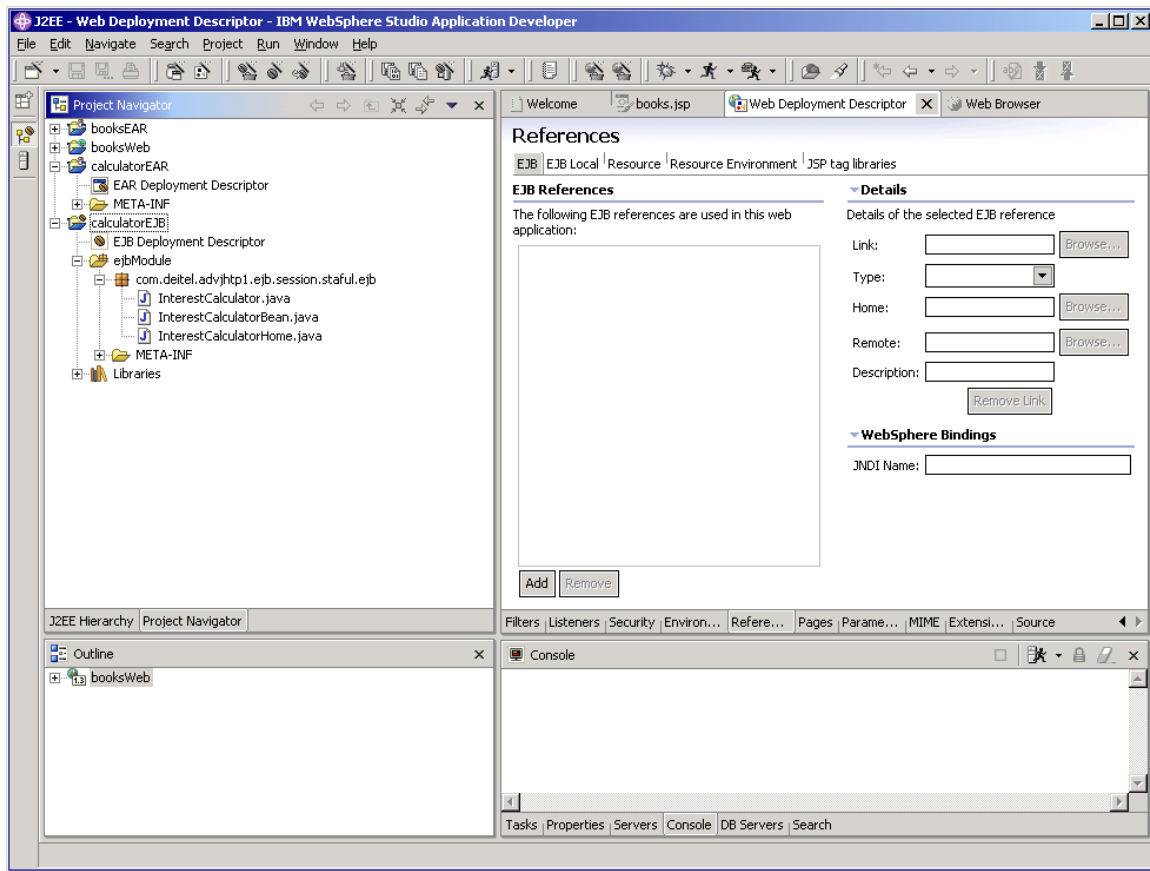
Remote home interface:

Remote interface:

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(stateful)

Correction: Just simply use **InterestCalculator**
Finish



Copy InterestCalculator fig 14.3

Do not change anything in InterestCalculatorHome.java

Add to the implementation specific class variables and methods to the InterestCalculatorBean.java

```
package com.deitel.advjhtml.ejb.session.stateful.ejb;

// Java core libraries
import java.util.*;

// Java standard extensions
import javax.ejb.*;

public class InterestCalculatorEJB implements SessionBean {

    private SessionContext sessionContext;

    // state variables
    private double principal;
    private double interestRate;
    private int term;

    // set principal amount
    public void setPrincipal( double amount )
    {
        principal = amount;
    }

    // set interest rate
    public void setInterestRate( double rate )
    {

```

```

        interestRate = rate;
    }

    // set loan length in years
    public void setTerm( int years )
    {
        term = years;
    }

    // get loan balance
    public double getBalance()
    {
        // calculate simple interest
        return principal * Math.pow( 1.0 + interestRate, term );
    }

    // get amount of interest earned
    public double getInterestEarned()
    {
        return getBalance() - principal;
    }

    // set SessionContext
    public void setSessionContext( SessionContext context )
    {
        sessionContext = context;
    }

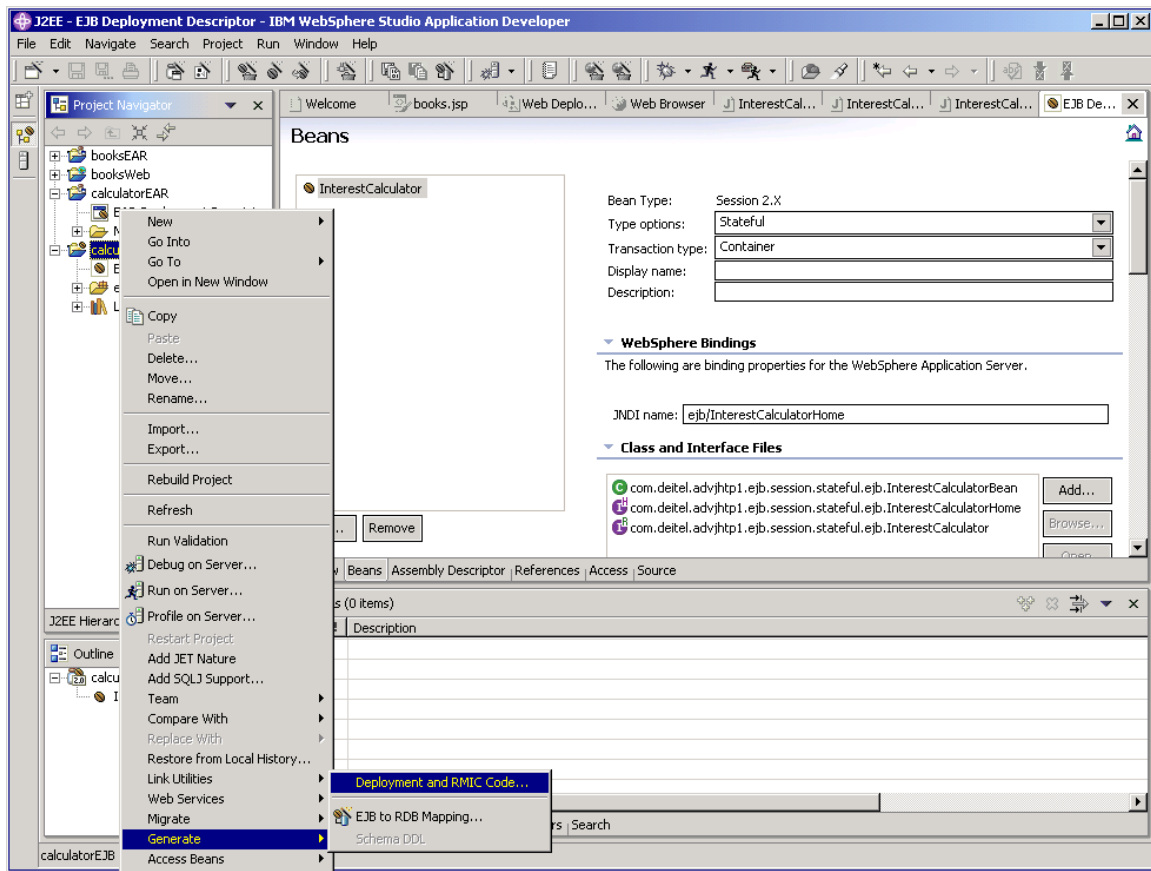
    // create InterestCalculator instance
    public void ejbCreate() {}

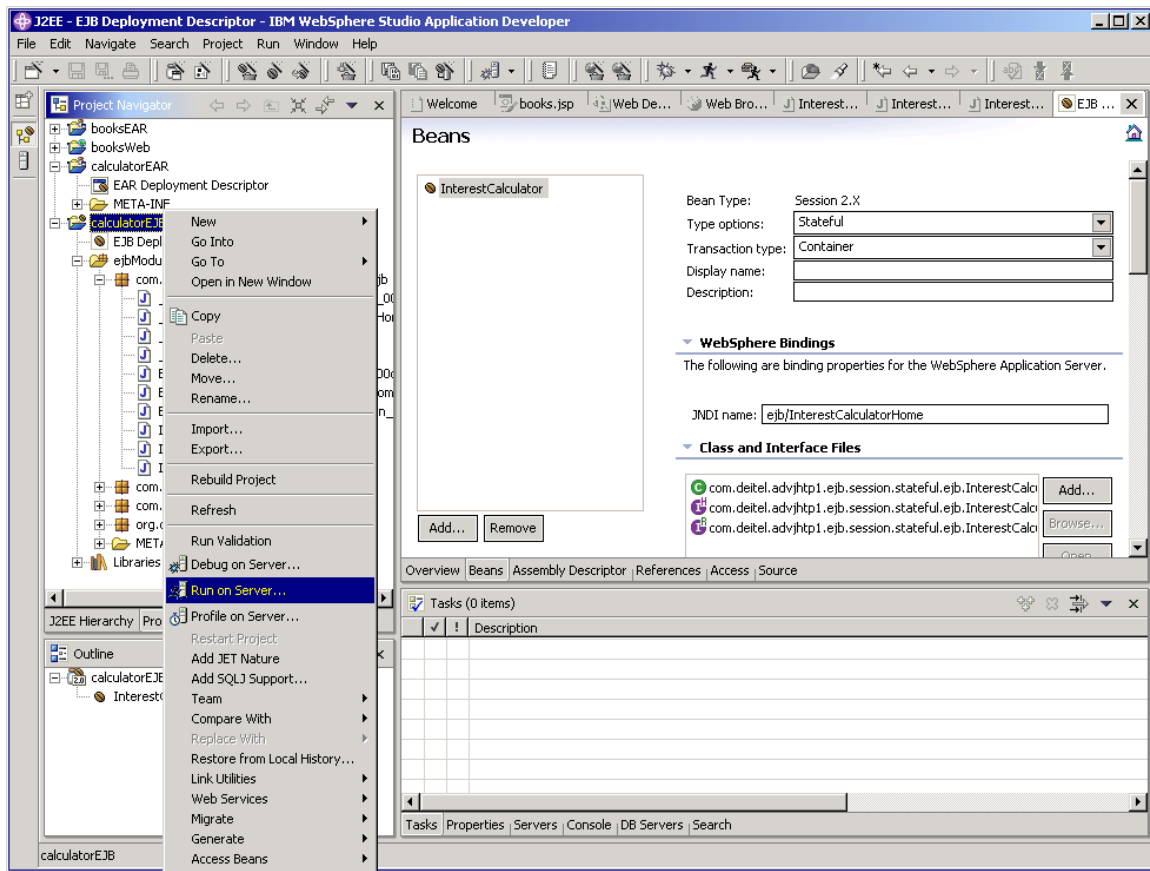
    // remove InterestCalculator instance
    public void ejbRemove() {}

    // passivate InterestCalculator instance
    public void ejbPassivate() {}

    // activate InterestCalculator instance
    public void ejbActivate() {}
}

```








Server Selection

Server selection

Select which server to launch.



☒ Use an existing server

Server	Status
 WebSphere v5.0 Test Environment	Not configured


Status: The server will be automatically configured for this project


☐ Create a new server


Folder: Servers


Server type:

WebSphere version 5.0

 Server

 Test Environment

 WebSphere v4.0 Server

 Other

Description:

☐ Set server as project default (do not prompt)

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Select Tasks

Select Tasks

Select the tasks to complete before launching the server.

Tasks for: calculatorEJB

☒ Deploy EJB beans

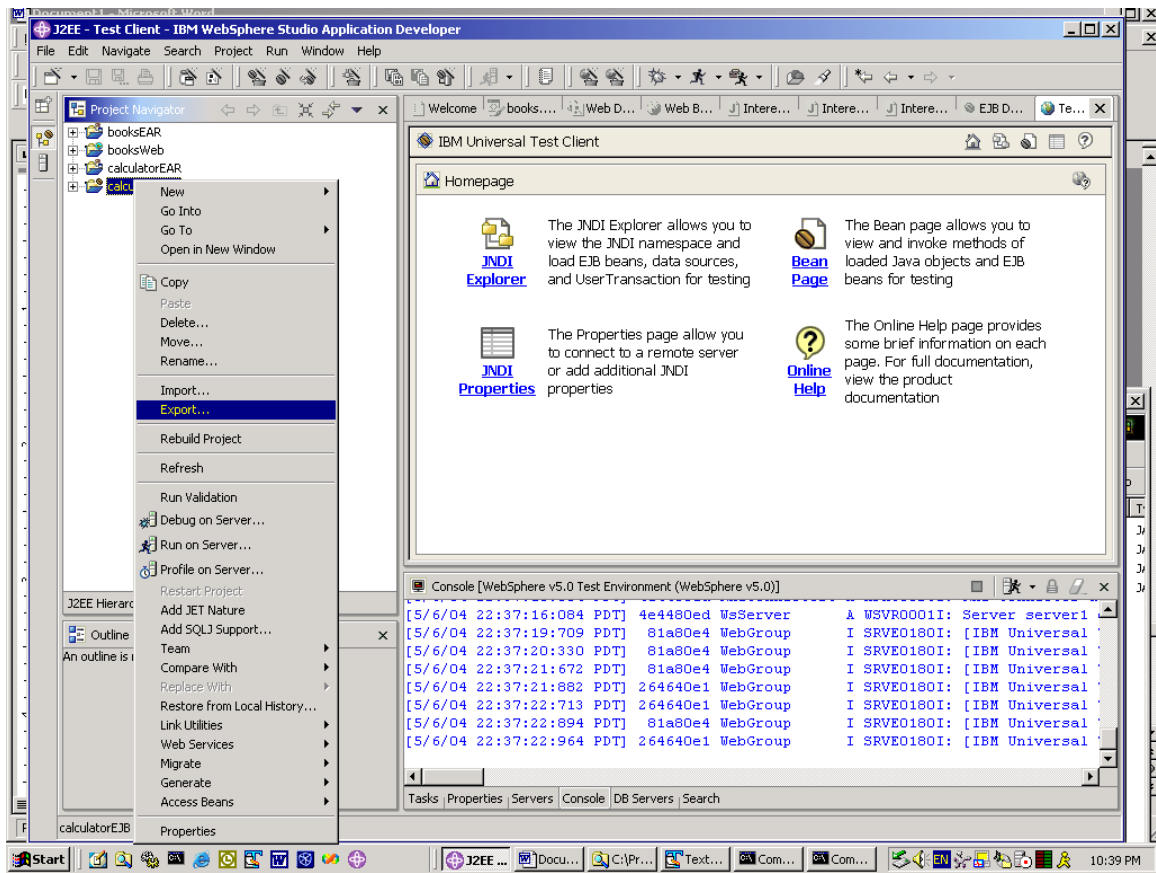
Generate EJB deploy and RMIC code

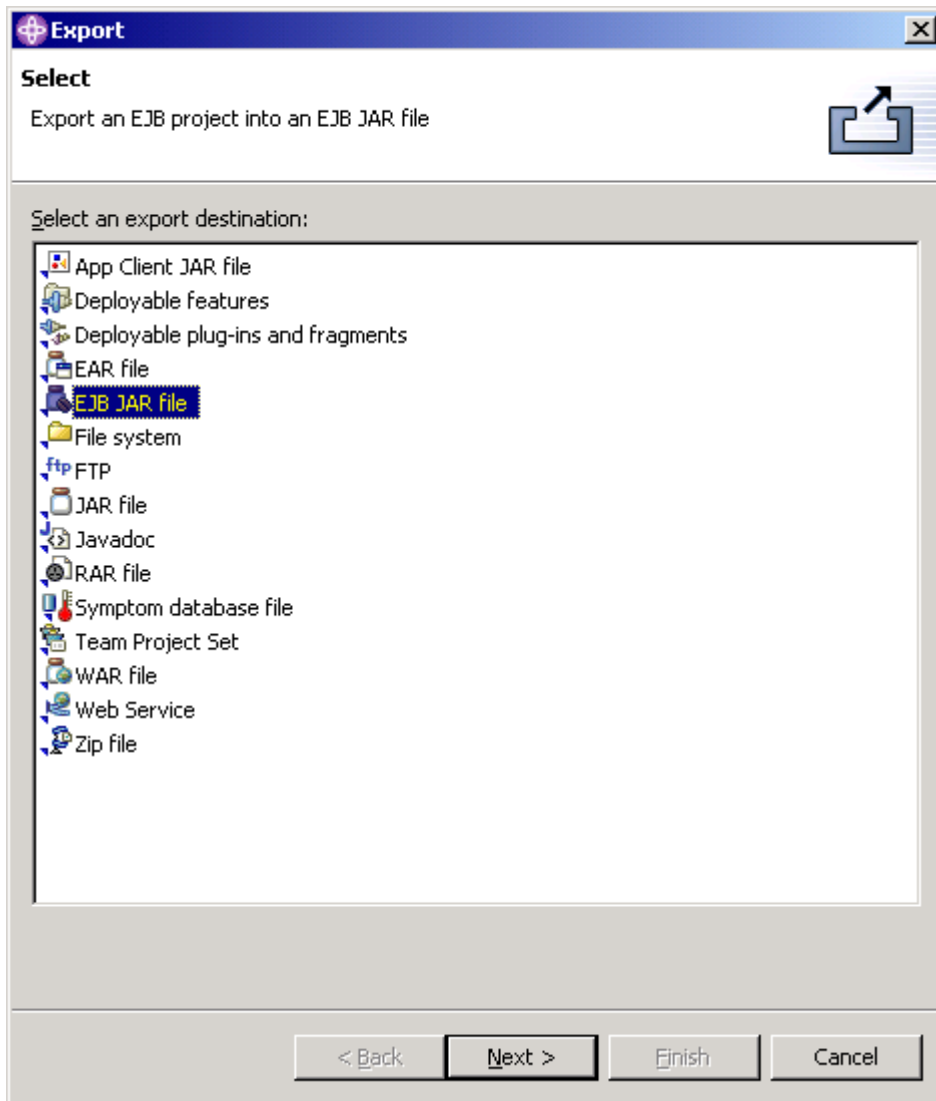
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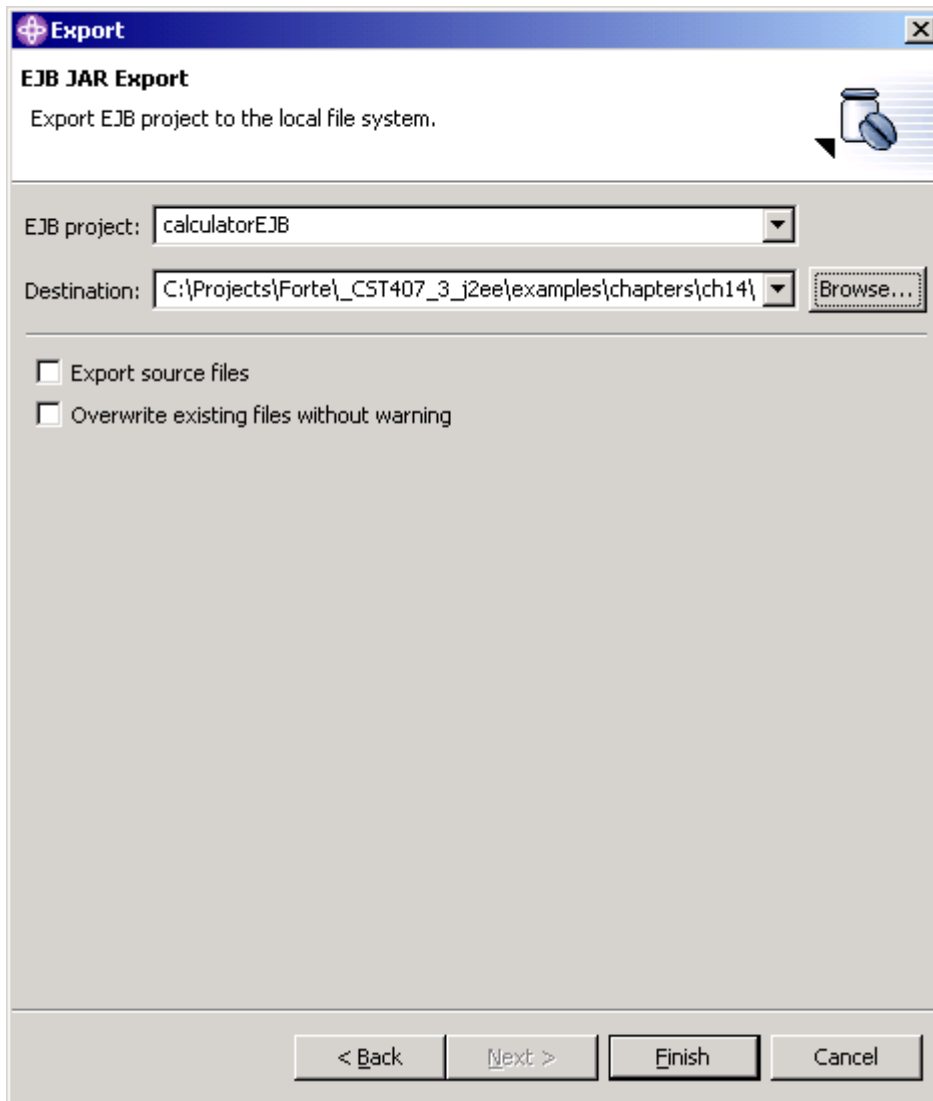
Next >

Finish

Cancel







```
C:\Projects\Forte\_CST407_3_j2ee\examples\chapters\ch14\fig14_03>javac -classpath .;"E:\Program Files\IBM\WebSphere Studio\Application Developer\v5.1\runtimes\base_v5\lib\j2ee.jar";calculatorEJB.jar -d . InterestCalculatorClient.java
```

Generate Deployment and RMIC Code

Generate Deployment and RMIC Code for the selected Enterprise Beans

The selected beans have changed during this session and need updated deployment code.

☒InterestCalculator

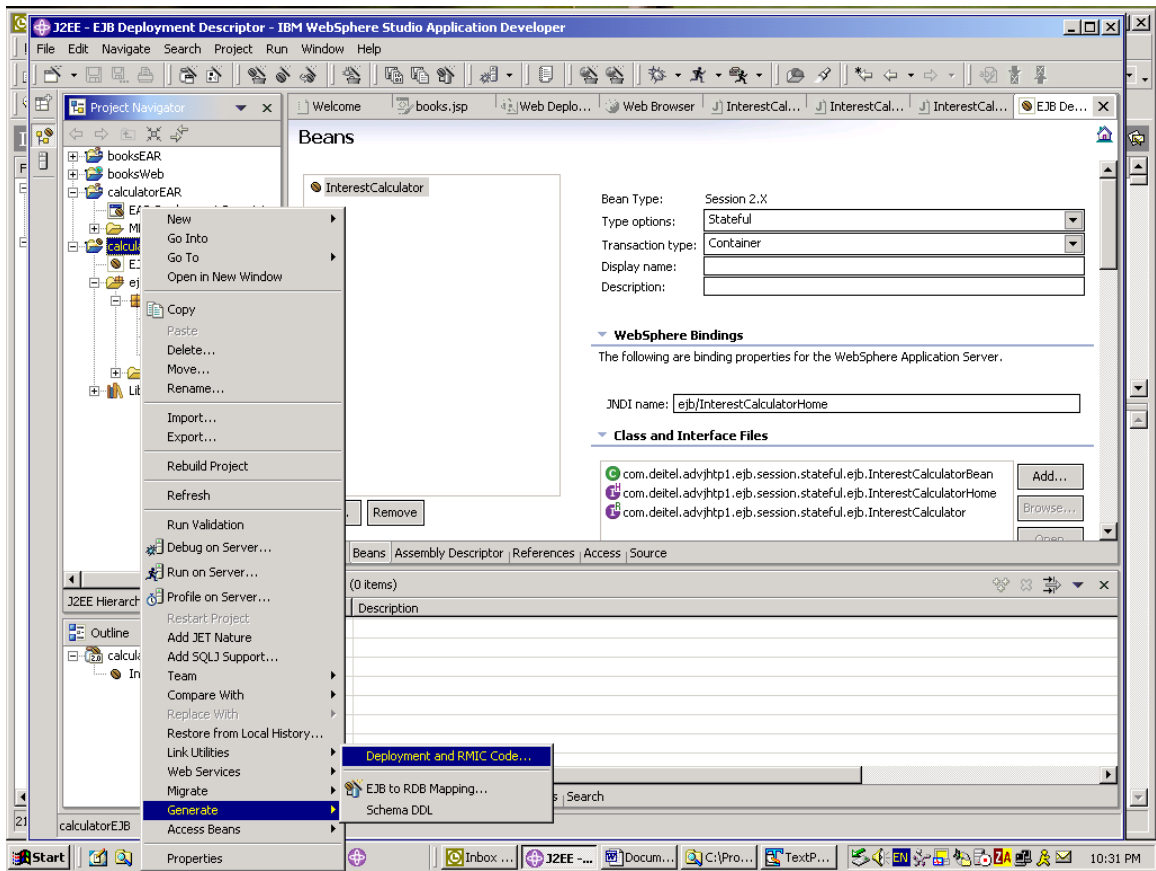
Select all

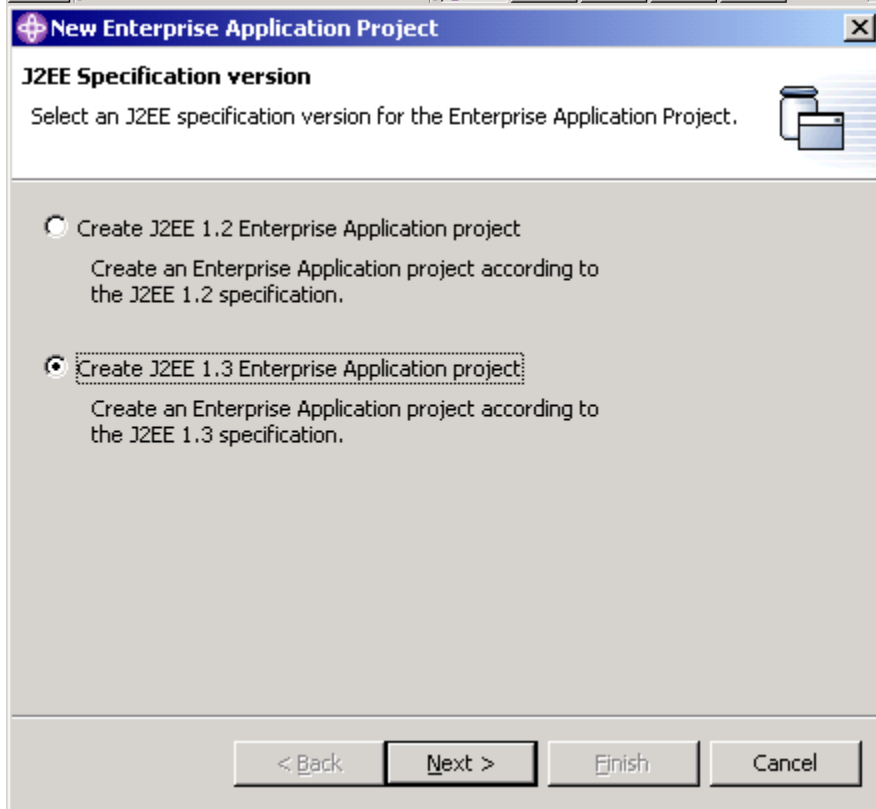
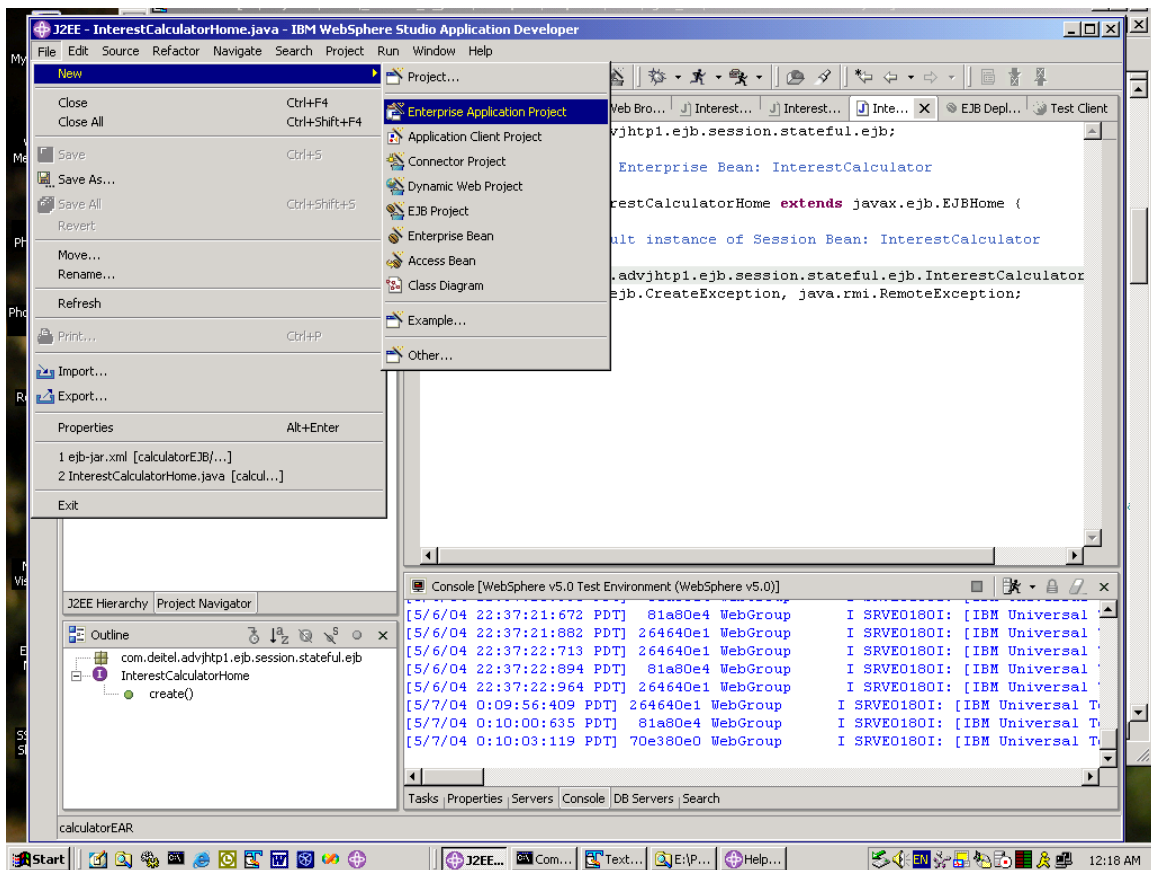
Deselect all

Default

Finish

Cancel





New Enterprise Application Project

Enterprise Application Project

Create an Enterprise Application project containing one or more module projects.

Project name: calculatorClient

Project location: C:\Projects\IBM\wsadTest\workspace\calculatorClient

Browse...

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Finish

Cancel

New Enterprise Application Project

EAR Module Projects

Select the module projects to add to the new EAR project from the list.
Select New Module button to create a new module project.

☐ booksWeb

☒ calculatorEJB

Select All

Deselect All

New Module...

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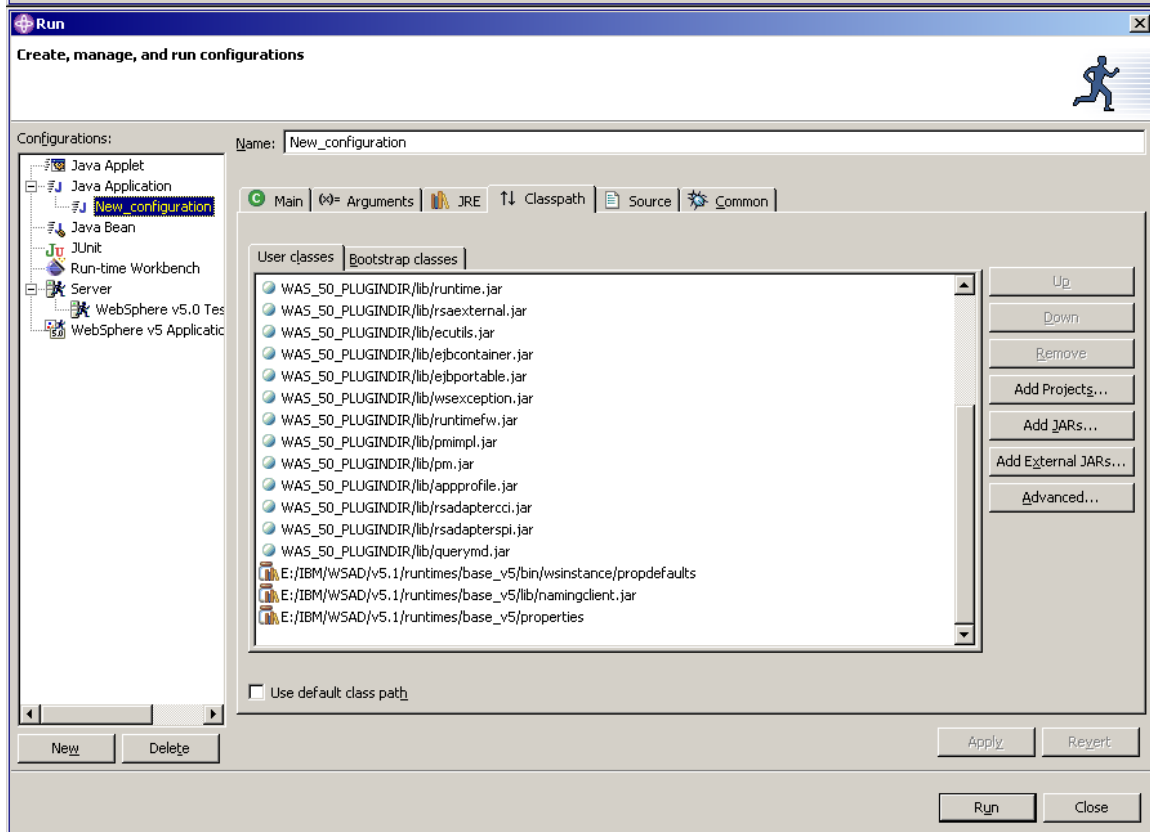
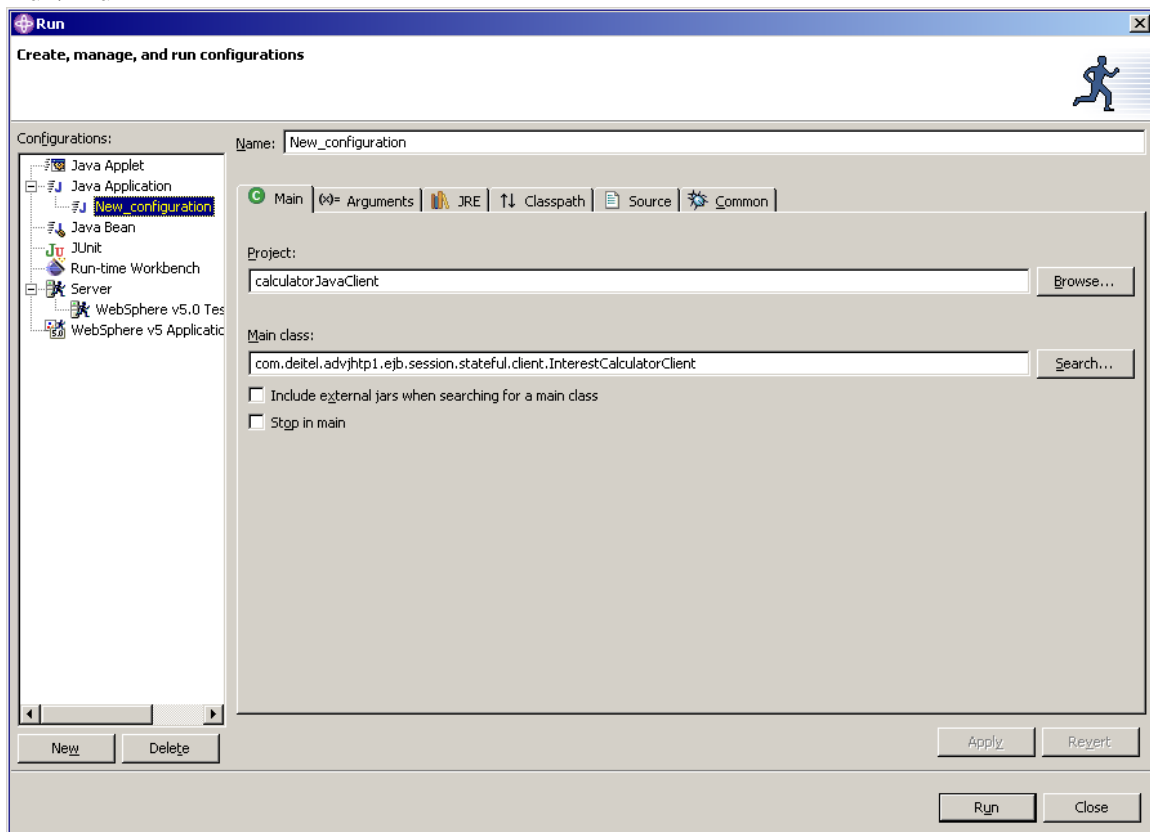
Next >

Finish

Cancel

Finish

Run/ Run



External Client

```
javac -classpath
.;calculatorEJB.jar;C:\IBM\WSAD\v5.1\runtimes\base_v5\lib\j2ee.jar;C:\I
BM\WSAD\v5.1\runtimes\base_v5\lib\naming.jar -d .
InterestCalculatorClient.java
```

```
C:\IBM\WSAD\v5.1\eclipse\jre\bin\java -classpath
.;C:\IBM\WSAD\v5.1\runtimes\base_v5\lib\j2ee.jar;C:\IBM\WSAD\v5.1\runti
mes\base_v5\lib\naming.jar;calculatorEJB.jar;C:\IBM\WSAD\v5.1\runtimes\
base_v5\lib\namingclient.jar;C:\IBM\WSAD\v5.1\runtimes\base_v5\lib\ecut
ils.jar;C:\IBM\WSAD\v5.1\runtimes\base_v5\java\jre\lib\ext\ibmorb.jar;C
:\IBM\WSAD\v5.1\eclipse\jre\lib\rt.jar;C:\IBM\WSAD\v5.1\runtimes\base_v
5\properties;C:\IBM\WSAD\v5.1\runtimes\base_v5\bin\wsinstance\propdefau
lts com.deitel.advjhtpl.ejb.session.stateful.client.InterestCalculatorClient
```

```
{
    // lookup InterestCalculatorHome and create
    // InterestCalculator EJB
    try {
        Properties properties = new Properties();
        properties.put( javax.naming.Context.PROVIDER_URL,
            "iiop://localhost:2809" );
        properties.put( javax.naming.Context.INITIAL_CONTEXT_FACTORY,
            "com.ibm.websphere.naming.WsnInitialContextFactory" );

        InitialContext initialContext = new InitialContext(properties);

        // lookup InterestCalculator EJB
        Object homeObject =
            initialContext.lookup( "InterestCalculator" );

        // get InterestCalculatorHome interface
        InterestCalculatorHome calculatorHome =
            ( InterestCalculatorHome )
                PortableRemoteObject.narrow( homeObject,
                    InterestCalculatorHome.class );

        // create InterestCalculator EJB instance
        calculator = calculatorHome.create();

    } // end try

    // handle exception if InterestCalculator EJB not found
    catch ( NamingException namingException ) {
        namingException.printStackTrace();
    }

    // handle exception when creating InterestCalculator EJB
    catch ( RemoteException remoteException ) {
        remoteException.printStackTrace();
    }

    // handle exception when creating InterestCalculator EJB
    catch ( CreateException createException ) {
        createException.printStackTrace();
    }
} // end method createInterestCalculator
```