

@ApplicationException annotation

Example `applicationexception` can be browsed at <https://github.com/apache/tomee/tree/master/examples/applicationexception>

Declaring an `@ApplicationException`

```
import javax.ejb.ApplicationException;

/**
 * @version $Rev: 784112 $ $Date: 2009-06-12 06:23:57 -0700 (Fri, 12 Jun 2009) $
 */
@ApplicationException(rollback = true)
public abstract class BusinessException extends RuntimeException {
}
```

By default, `@ApplicationException` is inherited

```
public class ValueRequiredException extends BusinessException {
}
```

In the bean code

```
@Stateless
public class ThrowBusinessExceptionImpl implements ThrowBusinessException {

    public void throwValueRequiredException() throws BusinessException {
        throw new ValueRequiredException();
    }

}
```

Normally throwing a `RuntimeException` would cause the container to both rollback the transaction and destroy the bean instance that threw the exception.

As `BusinessException` has been annotated `@ApplicationException(rollback = true)` only the transaction rollback will occur and the bean will not get destroyed.

The TestCase

```

import org.junit.Assert;
import org.junit.Before;
import org.junit.Test;

import javax.naming.Context;
import javax.naming.InitialContext;
import java.util.Properties;

public class ThrowBusinessExceptionImplTest {

    private InitialContext initialContext;

    @Before
    public void setUp() throws Exception {
        Properties properties = new Properties();
        properties.setProperty(Context.INITIAL_CONTEXT_FACTORY,
"org.apache.openejb.core.LocalInitialContextFactory");

        initialContext = new InitialContext(properties);
    }

    @Test(expected = ValueRequiredException.class)
    public void testCounterViaRemoteInterface() throws Exception {
        Object object = initialContext.lookup("ThrowBusinessExceptionImplRemote");

        Assert.assertNotNull(object);
        Assert.assertTrue(object instanceof ThrowBusinessException);
        ThrowBusinessException bean = (ThrowBusinessException) object;
        bean.throwValueRequiredException();
    }
}

```

Running

T E S T S

```
Running org.superbiz.appexception.ThrowBusinessExceptionImplTest
Apache OpenEJB 4.0.0-beta-1    build: 20111002-04:06
http://tomee.apache.org/
INFO - openejb.home = /Users/dblevins/examples/applicationexception
INFO - openejb.base = /Users/dblevins/examples/applicationexception
INFO - Configuring Service(id=Default Security Service, type=SecurityService,
provider-id=Default Security Service)
INFO - Configuring Service(id=Default Transaction Manager, type=TransactionManager,
provider-id=Default Transaction Manager)
INFO - Found EjbModule in classpath:
/Users/dblevins/examples/applicationexception/target/classes
INFO - Beginning load: /Users/dblevins/examples/applicationexception/target/classes
INFO - Configuring enterprise application:
/Users/dblevins/examples/applicationexception/classpath.ear
INFO - Configuring Service(id=Default Stateless Container, type=Container, provider-
id=Default Stateless Container)
INFO - Auto-creating a container for bean ThrowBusinessExceptionImpl:
Container(type=STATELESS, id=Default Stateless Container)
INFO - Enterprise application
"/Users/dblevins/examples/applicationexception/classpath.ear" loaded.
INFO - Assembling app: /Users/dblevins/examples/applicationexception/classpath.ear
INFO - Jndi(name=ThrowBusinessExceptionImplRemote) --> Ejb(deployment-
id=ThrowBusinessExceptionImpl)
INFO -
Jndi(name=global/classpath.ear/applicationexception/ThrowBusinessExceptionImpl!org.sup
erbiz.appexception.ThrowBusinessException) --> Ejb(deployment-
id=ThrowBusinessExceptionImpl)
INFO - Jndi(name=global/classpath.ear/applicationexception/ThrowBusinessExceptionImpl)
--> Ejb(deployment-id=ThrowBusinessExceptionImpl)
INFO - Created Ejb(deployment-id=ThrowBusinessExceptionImpl, ejb-
name=ThrowBusinessExceptionImpl, container=Default Stateless Container)
INFO - Started Ejb(deployment-id=ThrowBusinessExceptionImpl, ejb-
name=ThrowBusinessExceptionImpl, container=Default Stateless Container)
INFO - Deployed
Application(path=/Users/dblevins/examples/applicationexception/classpath.ear)
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 1.434 sec
```

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0