

# Stateful Session Beans

## Remote Home Interface

```
public interface BeanRemoteHome extends EJBHome
```

```
    [implements OtherInterfaces] {
```

```
    public BeanRemote createMethod1(p1, ..., pn)
        throws RemoteException, CreateException [, ApplicationException];
    ...
    public BeanRemote createMethodN(p1, ..., pn)
        throws RemoteException, CreateException [, ApplicationException];
```

```
}
```

## Remote Component Interface

```
public interface BeanRemote extends EJBObject
```

```
    [implements OtherInterfaces] {
```

```
    public Type businessMethod1(p1, ..., pn)
        throws RemoteException [, ApplicationException];
    ...
    public Type businessMethodN(p1, ..., pn)
        throws RemoteException [, ApplicationException];
```

```
}
```

## Stateful Session Bean Class

```
public abstract final class BeanEJB [extends SomeSuperClass]
```

```
    implements SessionBean [, OtherInterfaces, BeanRemote, SessionSynchronization] {
```

```
    [public BeanEJB() {}]
```

```
    public static final void ejbCreateMethod1(p1, ..., pn)
        throws CreateException [,AppException] {...}
    ...
    public static final void ejbCreateMethodN(p1, ..., pn)
        throws CreateException [,AppException] {...}
```

```
    public static final Type ejbbusinessMethod1(p1, ..., pn) [throws ApplicationException] {...}
    ...
    public static final Type ejbbusinessMethodN(p1, ..., pn) [throws ApplicationException] {...}
```

```
    public void ejbPassivate() throws RemoteException, EJBException {...}
    public void ejbActivate() throws RemoteException, EJBException {...}
    public void ejbRemove() throws RemoteException, EJBException {...}
    public void setSessionContext(ctx) throws RemoteException, EJBException {...}
```

```
[
    public void afterBegin() {...}
    public void beforeCompletion() {...}
    public void afterCompletion(boolean committed) {...}
]
```

```
[private Type helperMethod(p1, ..., pn) {...}]
```

```
protected void finalize() throws Throwable {...}
```

```
}
```

**Notice:** content between square brackets [...] is optional and stroked content is strictly forbidden.

# Stateless Session Beans

## Remote Home Interface

```
public interface BeanRemoteHome extends EJBHome
```

```
[implements OtherInterfaces] {
```

```
public BeanRemote create()
    throws RemoteException, CreateException [, AppException];
```

```
}
```

## Remote Component Interface

```
public interface BeanRemote extends EJBObject
```

```
[implements OtherInterfaces] {
```

```
public Type businessMethod1(p1, ..., pn)
    throws RemoteException [, AppException];
```

```
...
```

```
public Type businessMethodN(p1, ..., pn)
    throws RemoteException [, AppException];
```

```
}
```

## Stateless Session Bean Class

```
public abstract final class BeanEJB [extends SomeSuperClass]
```

```
    implements SessionBean [OtherInterfaces, BeanRemote] {
```

```
[public BeanEJB(){}]
```

```
public static final void ejbCreate() throws CreateException [, AppException] {...}
```

```
public static final Type ejbbusinessMethod1(p1, ..., pn) [throws AppException] {...}
```

```
...
public static final Type ejbbusinessMethodN(p1, ..., pn) [throws AppException] {...}
```

```
public void ejbPassivate() throws RemoteException, EJBException {...}
```

```
public void ejbActivate() throws RemoteException, EJBException {...}
```

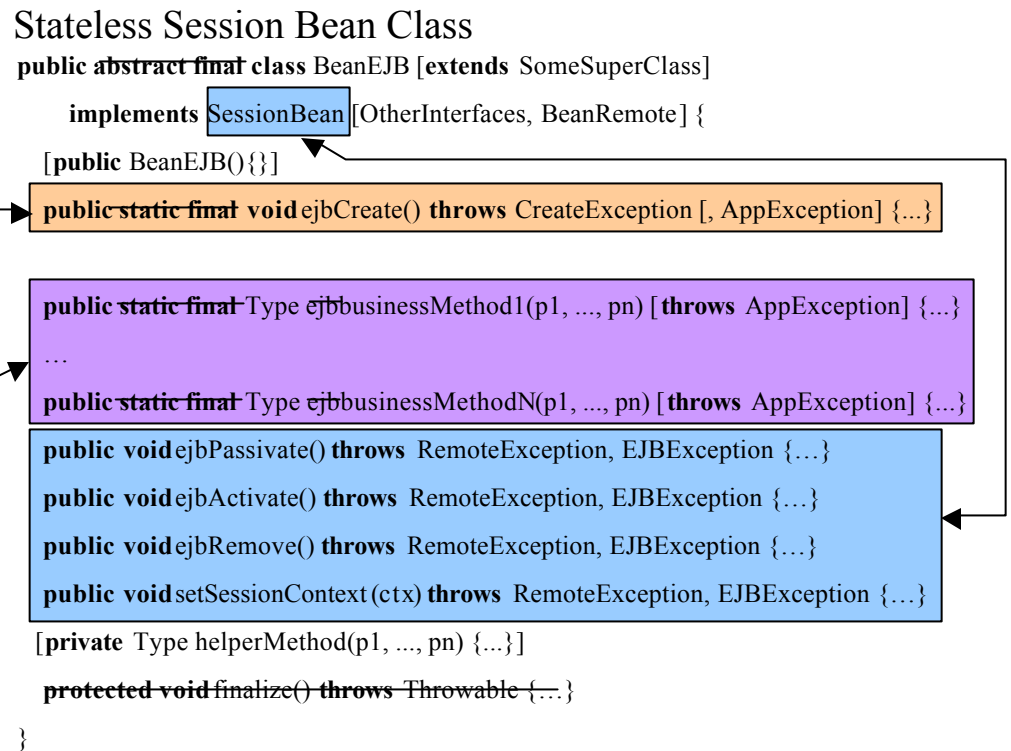
```
public void ejbRemove() throws RemoteException, EJBException {...}
```

```
public void setSessionContext(ctx) throws RemoteException, EJBException {...}
```

```
[private Type helperMethod(p1, ..., pn) {...}]
```

```
protected void finalize() throws Throwable {...}
```

```
}
```



# Message-Driven Beans

## Message-Driven Bean Class

```
public abstract final class BeanEJB [extends SomeSuperClass] implements MessageListener, MessageDrivenBean [, OtherInterfaces] {  
    [public BeanEJB(){}]  
    public static final void ejbCreate() throws ApplicationException {...}  
    public static final void onMessage(Message msg) throws ApplicationException {...}  
    public void ejbRemove() throws EJBException, ApplicationException {...}  
    public void setMessageDrivenContext(ctx) throws EJBException {...}  
    [private Type helperMethod(p1, ..., pn) {...}]  
    protected void finalize() throws Throwable {...}  
}
```

```
graph TD; BeanEJB[BeanEJB] --> MessageListener[MessageListener]; BeanEJB --> MessageDrivenBean[MessageDrivenBean]; MessageListener --> MessageDrivenBean;
```

# Entity Beans

## Remote Home Interface

```
public interface BeanRemoteHome extends EJBHome
```

```
[implements OtherInterfaces] {
```

```
public BeanRemote createMethod1(p1, ..., pn)
    throws RemoteException, CreateException [, AppException];
...
public BeanRemote createMethodN(p1, ..., pn)
    throws RemoteException, CreateException [, AppException];
```

```
public Type homeMethod1(p1, ..., pn)
    throws RemoteException [, AppException];
public Type homeMethodN(p1, ..., pn)
    throws RemoteException [, AppException];
```

```
public BeanRemote [or Collection] find<METHOD>(p1, ..., pn)
    throws RemoteException, FinderException;
public BeanRemote findByPrimaryKey(PKeyType pk)
    throws RemoteException, FinderException;
}
```

## Remote Component Interface

```
public interface BeanRemote extends EJBObject
```

```
[implements OtherInterfaces] {
```

```
public Type businessMethod1(p1, ..., pn)
    throws RemoteException [, AppException];
...
public Type businessMethodN(p1, ..., pn)
    throws RemoteException [, AppException];
}
```

## Abstract Entity Bean Class

```
public abstract class BeanEJB [extends SomeSuperClass] implements EntityBean [, OtherInterfaces, BeanRemote] {
```

```
[public BeanEJB() {}]
```

```
public static final PKeyType ejbCreateMethod1(p1, ..., pn) throws CreateException [, AppException] {...}
...
public static final PKeyType ejbCreateMethodN(p1, ..., pn) throws CreateException [, AppException] {...}
public static final void ejbPostCreateMethod1(p1, ..., pn) throws CreateException [, AppException] {...}
...
public static final void ejbPostCreateMethodN(p1, ..., pn) throws CreateException [, AppException] {...}
```

```
public static Type ejbHomeMethod1(p1, ..., pn) [throws AppException] {...}
...
public static Type ejbHomeMethodN(p1, ..., pn) [throws AppException] {...}
```

```
public abstract Type ejbSelect<METHOD>(p1, ..., pn) throws FinderException [, AppException];
```

```
public static final Type ejbbusinessMethod1(p1, ..., pn) [throws AppException] {...}
...
public static final Type ejbbusinessMethodN(p1, ..., pn) [throws AppException] {...}
```

```
public void ejbPassivate() throws RemoteException, EJBException {...}
public void ejbActivate() throws RemoteException, EJBException {...}
public void ejbLoad() throws RemoteException, EJBException {...}
public void ejbStore() throws RemoteException, EJBException {...}
public void ejbRemove() throws RemoteException, RemoveException, EJBException {...}
public void setEntityContext(ctx) throws RemoteException, EJBException {...}
public void unsetEntityContext() throws RemoteException, EJBException {...}
```

```
public abstract void setCMPField(Type f);
public abstract Type getCMPField();
public abstract void setCMRField(Type f);
public abstract Type getCMRField();
[private Type helperMethod(p1, ..., pn) {...}]
protected void finalize() throws Throwable {...}
}
```

EntityBean

