

EJB 3.0 and Java Persistence

Entities represent tables (Order and LineItem)

@Entity(...)

```
public class Order {  
  
    @Id  
    @GeneratedValue(strategy=GenerationType.AUTO)  
    private int id;  
  
    @OneToMany(mappedBy="order")  
    private Collection<LineItem> lineItems;  
  
    private double total;  
  
    public int getId() {  
        return id;  
    }  
    public void setId(int id) {  
        this.id = id;  
    }  
    public double getTotal() {  
        return total;  
    }  
    public void setTotal(double total) {  
        this.total = total;  
    }  
    public Collection<LineItem> getLineItems() {  
        return lineItems;  
    }  
}
```

@Entity

```
public class LineItem {  
  
    @Id  
    @GeneratedValue(strategy=GenerationType.AUTO)  
    private int id;  
  
    @ManyToOne  
    private Order order;  
  
    public int getId() {  
        return id;  
    }  
    public void setId(int id) {  
        this.id = id;  
    }  
    public Order getOrder() {  
        return order;  
    }  
    public void setOrder(Order order) {  
        this.order = order;  
    }  
}
```

Storing entities to database and **retrieving entities** from database in EJBs (persistence context is defined by **persistence unit**):

@Stateless

```
public class MySessionBean implements MySessionBeanLocal

    @PersistenceContext
    private EntityManager em;

    public void store(Order order) {
        em.persist(order);
    }

    public Collection<Order> findAll() {
        Query q = em.createQuery("SELECT o FROM Order o");
        return q.getResultList();
    }

    public Order findByTotal(double total) {
        // Using named query defined in Order entity
        Query q = em.createNamedQuery("Order.findByTotal");
        q = q.setParameter("total", total);
        return q.getSingleResult();
    }
}
```

Using session beans in client code (works in Servlet or JSF Managed Beans; doesn't work in JSP):

```
// Inject session bean
@EJB MySessionBeanLocal bean;
```