

## CustomerRepository.java

```

1 package model.repository;
2
3 import java.io.Serializable;
4
16
17 public class CustomerRepository implements ServletContextListener {
18
19     @PersistenceUnit(unitName = "store-pu")
20     private EntityManagerFactory emf;
21
22     private EntityManager em;
23
24     public CustomerRepository() {
25         emf = (EntityManagerFactory) Persistence.createEntityManagerFactory
26 ("store-pu");
27         System.out.println("[SERVLET-TEST-INFO]: CustomerRepository
28 Constructor");
29     }
30
31     @Override
32     public void contextDestroyed(ServletContextEvent sce) {
33         if (emf.isOpen()) {
34             emf.close();
35         }
36     }
37
38     @Override
39     public void contextInitialized(ServletContextEvent sce) {
40         ServletContext context = sce.getServletContext();
41         context.setAttribute("customerRepository", this);
42         System.out.println("[SERVLET-TEST-INFO]: Contexto inicializado!
43 CustomerRepository");
44     }
45
46     public final EntityManager entityManager() {
47         if (em == null || !em.isOpen()) {
48             em = emf.createEntityManager();
49         }
50         return em;
51     }
52
53     public void persistOrMerge(Serializable entity, Serializable id) {
54         em = entityManager();
55
56         if (entity == null) {
57             throw new IllegalArgumentException("entity");
58         }
59         try {
60             em.getTransaction().begin();
61             if (id == null) {
62                 em.persist(entity);
63             } else {
64                 em.merge(entity);
65             }
66         }

```

# CustomerRepository.java

```
63         em.getTransaction().commit();
64     } finally {
65         em.close();
66     }
67 }
68
69 public Customer findCustomerById(Long id) {
70     em = entityManager();
71     return em.find(Customer.class, id);
72 }
73
74 public List findAllCustomers() {
75     em = entityManager();
76     Query q = em.createQuery("select c from Customer c");
77     return q.getResultList();
78 }
79
80 public Customer newCustomer() {
81     Customer c = new Customer();
82     persistOrMerge(c, c.getId());
83     return c;
84 }
85 }
```