

Session beans and methods

List of object manager

- CustomerManager
- AdminManager
- HostDoorSystemManager
- ListingManager
- BookingManager
- TransactionManager
- LocationManager
- LocationDetailManager
- ProfileManager
- FeedbackManager

List of session beans:

CRUD controller

- CustomerController
- AdminController
- HostDoorSystemController
- ListingController
- BookingController
- TransactionController
- LocationController
- LocationDetailController
- ProfileController
- FeedbackController

Specialized controller

- AccessController (Manage login, logout, verify account)
- ShoppingCartController (store lists of booking information but not create objects yet)
- CheckoutController (Manage mass bookings, transaction documentation)
- QRCodeController (generate QR code, generate Master QR code, update QR code of customer, verifyQRcode)
- SearchController (retrieve listing by filters)
- ScheduleController (retrieve booking information of listings)
- TimerController (schedule to carry out automated actions - update customer average rating, update host master qr code on a weekly basis.)
- InitializationBean (Create admin users - manager)
- EmailMDB (Send email notification)

Exception:

- NoResultException

Enumeration:

- AccessRightEnum: CUSTOMER, MANAGER,ADMIN
- EntityStatusEnum: ACTIVE, INACTIVE
- AvailablityEnum: AVAILABLE, UNAVAILABLE
- BuildingTypeEnum: OPEN SPACE, LECTURE ROOM, MEETING ROOM, STUDY ROOM

Object CRUD Session Beans

CustomerController (stateless)

```
public void createCustomer(Customer customer)
public Customer retrieveCustomer(Long cld)
public Customer retrieveCustomerByEmail(String email)
public List<Customer> retrieveAllCustomers()
public void updateCustomer (Customer customer)
public void deleteCustomer(Customer customer)
public void addListing(Long cld, Listing listing)
public void removeListing(Long cld, Listing listing)
public void addBooking(Long cld, Booking booking)
public void removeBooking(Long cld, Booking booking)
public void addFeedback(Long cld, Feedback feedback)
public void removeFeedback(Long cld, Feedback feedback)
```

AdminController (stateless)

```
public void createAdmin(Admin admin)
public Admin retrieveAdmin(Long ald)
public Admin retrieveAdminByEmail(String email)
public Admin retrieveAllAdmin()
public void updateAdmin(Admin admin)
public void deleteAdmin(Long id)
```

HostDoorSystemController (stateless)

```
public void createDoorAccount(HostDoorSystem hostDoorSystem)
public HostDoorSystem retrieveDoorAccount(Long hld)
public HostDoorSystem retrieveDoorAccountByHost(Customer customer)
public List<HostDoorSystem> retrieveAllDoorAccount()
public void updateDoorAccount(HostDoorSystem hostDoorSystem)
public void deleteDoorAccount(Long hld)
```

ListingController (stateless)

```
public Listing createListing(Listing listing)
public List<Listing> retrieveAllListing()
public List<Listing> retrieveListingByDoorId(HostDoorSystem hostDoorSystem)
public List<Listing> retrieveListingByCustomer(Customer customer)
public List<Listing> retrieveListingByFields(DateTime startDate, DateTime endDate, Location
location, ListingDetail listingDetail, Feedback feedback, Booking booking)
public void updateListing(Listing listing)
public void deleteListing(Long lId)
```

BookingController (stateless)

```
public void createBooking(Booking booking)
public Booking retrieveBooking(Long bId)
public List<Booking> retrieveAllBooking()
public Booking retrieveBookingByField(Customer customer, Location location, DateTime
startDate, DateTime endDate, Enum type, Listing listing)
public void updateBooking(Booking booking)
public void deleteBooking(Long bId)
```

TransactionController (stateless)

```
public void createTransaction(Transaction transaction)
public Transaction retrieveTransaction(Transaction transaction)
public List<Transaction> retrieveAllTransaction()
public List<Transaction> retrieveTransactionByCustomer(Customer customer)
public void updateTransaction(Transaction transaction)
public void deleteTransaction( Transaction transaction)
```

FeedbackController (stateless)

```
public void createFeedback(Transaction transaction)
public Transaction retrieveFeedback(Transaction transaction)
public List<Feedback> retrieveAllFeedback()
public List<Feedback> retrieveFeedbackByCustomer(Customer customer)
public List<Feedback> retrieveFeedbackByListing(Listing listing)
public void updateFeedback(Feedback feedback)
public void deleteFeedback(Feedback feedback)
```

LocationController (stateless)

```
public void createLocation(Location location)
public Location retrieveLocation(Long lId)
public void updateLocation(Location location)
public void deleteLocation(Long lId)
```

LocationDetailController (stateless)

```
public void createListingDetail(ListingDetail listingDetail);

public ListingDetail retrieveListingDetail(Long lId);

public void updateListingDetail(ListingDetail listingDetail);

public void deleteListingDetail(Long lId);
```

ProfileController (stateless)

```
public void createProfile(Profile profile)
public Profile retrieveProfile(Long pId)
public void updateProfile(Profile profile)
public void deleteProfile(Long pId)
```

Operational Sessions beans (Specialized in their tasks)

AccessController

Public User login(String username, Password password)

//get user object using jbql

//if have return to user

//if not throw error and handle error at the front end with a status code

Public void logout()

//settle by frontend

ShoppingCartController (store lists of booking information but not create objects yet)(good-to-have)

//

CheckoutController (Manage mass bookings, transaction documentation)

//

QRCodeController (generate QR code, generate Master QR code, update QR code of customer, verifyQRcode)

generateQRCode()

//Math.random a int = 32

//Hash the code

//store the code

updateQRCode()//is this necessary?

verifyQRCode()

//Check if it belongs to the right HostDoorSystemUser and the right booking code using JDQL.

//if no result throw no result exception

TimerController (schedule to carry out automated actions - update customer average rating, update host master qr code on a weekly basis.)

InitializationBean (Create admin users - manager)

EmailMDB (Send email notification)