ENTITY

* + USER.JAVA
    - Int id
    - String name
    - String role (can be
    - String telephone [extensions for other countries have ‘+’ symbols]
    - String email
    - String username
    - String password
  + ASSET.JAVA
    - Int id
    - String name
    - Int categoryId (fkey to category)
    - String description
    - Date dateAdded
    - Boolean isAvailable
  + BORROWEDASSET.JAVA
    - Int assetId
    - Int userId
    - LocalDate borrowingDate
  + CATEGORY. JAVA
    - Int id
    - String name
    - Int lendingPeriod
    - Float lateFeesPerDay
    - Int banningPeriod
* STORAGE
  + USERSTORAGE.JAVA(INTERFACE)
    - Boolean addUser(User u)
    - User getUserDetails(int empId)
    - List<User> getAllUsers()
  + USERSTORAGEIMPL.JAVA
  + ASSETSTORAGE.JAVA(INTERFACE)
    - boolean addNewAsset(Asset a)
    - Asset findAssetDetails(int assetId)
    - List<Asset> getAllAssets()
  + ASSETSTORAGEIMPL.JAVA
  + BORROWEDASSETSTORAGE.JAVA(IMPL)
    - Boolean addNewBorrowedAsset(Asset a)
    - Boolean removeBorrowedAsset(Asset a)
    - Asset getBorrowedAssetDetails(int assetId)
  + BORROWEDASSETIMPL.JAVA
  + CATEGORTSTORAGE.JAVA(INTERFACE)
    - boolean addNewCategory(Category c)
    - List<Category> getAllCategories()
    - Category findCategory(int catId)
  + CATEGORYSTORAGEIMPL.JAVA
* SERVICE
  + USERSERVICE.JAVA(INTERFACE)
    - boolean addUser(User u) throws UserAlreadyExistsException – [status is added or not therefore more restricted Boolean]
    - User getUserDetails(int empId) throws UserNotFoundException
    - List<User> getAllUsers() throws UserNotFoundException
    - Int bannedTill(User u) throws UserNotFoundException
    - Int borrowAsset(Asset a) throws AssetNotFoundException—user can borrow any asset at any time—this calls the isAvailable() function and checks for availability—if available gives it to user and changes asset availability param to false and returns success status(aka status 1) else returns error msg(aka status 0)
  + USERSERVICEIMPL.JAVA
  + ASSETSERVICE.JAVA(INTERFACE)
    - Int addNewAsset(Asset a) throws AssetAlreadyExistsException
    - Asset findAssetDetails(int assetId) throws AssetNotFOundException
    - List<Asset> getAllAssets() throws AssetNotFOundException
    - Boolean isAvailable(Asset a)
    - Int calculateFine(User u)
  + ASSETSERVICEIMPL.JAVA
  + BORROWEDASSETSERVICE.JAVA(INTERFACE)
    - Boolean addNewBorrowedAsset(Asset a)
    - Boolean removeAsset(Asset a)
    - Asset getAssetDetails(int id)
    - Int calculateLateFees(Asset a)
    - Boolean isOverdue(Asset a)
  + CATEGORYSERVICE.JAVA(INTERFACE)
    - Int addNewCategory(Category c) throws CategoryAlreadyExistsException
    - List<Category> getAllCategories() throws CategoryNotFoundException
    - Category findCategory(int catId) throws CategoryNotFoundException
  + CATEGORYSERVICEIMPL.JAVA
* EXCEPTIONS
  + UserAlreadyExistsException
  + UserNotFoundException
  + AssetNotFoundException—should call addNewCategory() function with category of said asset as input param
  + AssetAlreadyExistsException
  + CategoryAlreadyExistsException
  + CategoryNotFoundException
* FDP
  + Object getInstance(int choice)—
    - USERSERVICE obj
    - ASSETSERVICE obj
    - CATEGORYSERVICE obj
* VIEW
  + MAIN.JAVA—use switch case with exit option