## **Changes in Design:**

# **Service Layer:**

Response<T>: Turned the class into a generic class in order to support deserialization of different types of return data

User Service:

- LogOut + DeleteUser gets string email instead of User user in order to easy the functions.

Jason Controller: used for everything json related

**Board Controller Service:** 

- change to primitive objects to easy to function.
- delete getAllBoards and SearchBoard functions redundant.

**Board Service:** 

- change to primitive objects to easy to function.

Task Service:

- change to primitive objects to easy to function.
- delete getter and setter to state redundant.

Other changes:

Added Serializable folder in BusinessLayer that contains serializable classes for: Task,Board,User

## **Business Layer:**

User Controller:

- LogOut, DeleteUser gets string email instead of User user in order to easy the functions.
- Add IsValidEmail method to check if the email inserted is valid.
- Add GetSerializableInstance for next functionality.

User:

User Data: Added the UserData class to centralize all the BusinessLayer user-related data. This includes the user himself and his boards.

Data Unit: private inner class of UserData. This is used as satellite data in the binary tree

BinaryTree<Key,Data>: added support for key and satellite data instead of supporting only IComparable data types

#### **Board Controller:**

- change to primitive objects to easy to function.
- add ValidateUser check registration and log in.
- add ValidateColumnOrdinal check if column is legal.

### Board:

- change to primitive objects to easy to function.
- add taskIdCounter in order to set task's id.
- change columns to Dictionary object to easy the function.
- add column functionality (GetColumnLimit, GetColumnName, GetColumn, LimitColumn).
- add TaskStateTracker to get task's state easly.
- add ValidateColumnOrdinal check if column is legal.

## Task:

- add id to defined task.
- add advanceTask to change the object's state.