Changes in Design:

General Changes:

Moved all exception classes into an Exception namespace

Moved/added the following classes into Utilities namespace:

- Response
- JsonEncoder(formerly "JsonController")
- CIString(CaseInsensitiveString)
- ValidateArguments
- AVLTree

Service Layer:

User Service:

- SetEmail & SetPassword gets string email instead of User user in order to simplify the functions.

JsonController => JsonEncoder:

Removed old unnecessary functions, simplified the class.

Task Service:

Moved the following functions: AddTask, RemoveTask, AdvaceTask from BoardService in to TaskService in order to have proper separation of concerns.

Added ServiceLayerFactory.

Business Layer:

We changed the email, board title, task title and task description from string to CIString in order to support case-insensitive names and match all the inputs of strings

Added DTO controllers fields to userController, boardController, taskConteoller in order to easily access the DataAccessLayer.

Task Controller:

We added this class in order to remove logic from the service layer.

Board Controller:

We added SearchBoard and GetBoard by email and Id (in addition to the functions with email and boardName).

Task:

Added boardId to the fields for dataBase uses.

Added Id to the fields.

Added email to the arguments that the function "AdvanceTask" gets.

Data Access Layer:

TaskDTO/UserDTO/BoardDTO :

 changed some data types such as: arrays to LinkedLists

Corrected implementation of SQL executer.

Added the DatabaseNuker class and corrected the implementation of DataLoader

Database:

Added table of GlobalCounters which has the boardId counter.