Presentation Layer

Service Layer

UserService

+ changePassword(username: string , oldP: string, newP: string): json
+ createUser(username: string, password: string): json
+ login(username: string, password: string): json
+ getBoard(BoardName: String): json
+ getInProgress(): json
+ logout(userEmail: string):json

BoardService

+ createBoard(Name: string, userEmail: string): void
+ addTask(Name: string, userEmail: string,title: String, Description: String, DueDate: DateTime): json
+ nextState(email: string, boardName: string, TaskID: int): json
+ deleteBoard(Name: string, userEmail: string): void
+InProgress(email: string): json
+GetColoum(email: string, boardName: string, coloumOrdinal: int): json
+LimitColoum(email: string, boardName: string, coloumOrdinal: int): json
+GetColoumName(email: string, boardName: string, coloumOrdinal: int): json
+GetColoumLimit(email: string, boardName: string, coloumOrdinal: int): json

TaskService

+ EditTitle(email:string, boardName:string, taskId:int, newTitle:string): json
+ EditDueDate(email:string, boardName:srting, taskId:int, newDueDate:DateTime): json
+ EditDescription(email:stringl, boardName:string, taskId:int, newDescription:string): json

Visibility

+ public
- private
protected

Business Layer

UserController

- users: Dictionary<string, User>
- loggedIn: Collection

+ CreateUser(password: string, email: String): void
+ DeleteUser(email: string): void
+ UserExists(email: string): boolean
+ GetUser(email: string): User
+ validatePassword(user: User, password: String): boolean
+ login(email: String, password: String): void
+ logout(user: User): void
+ IsValidEmail(email: string): bool
+IsLegalPassword(password: string): bool
+IsLoggedIn(email: string): bool

User

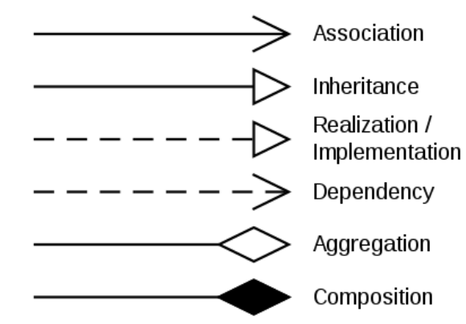
+ USERNAME: string
- password: string

+ ChangePassword(oldP: string, newP: string): void
+ ValidatePassword(password: string): bool

BoardBuissnes

- tasks(Dictionary<int,Task)
- InProgress(List<>)
+ Name(String)
- maxTasks(int [])
- numTasks(int[])

+ addTask(title: String, Description: String, DueDate: String): void
+ changeState(Task): void
+ ChangeState(int taskId):void
+ getters
+SetMaxTask(newMaxTask:int, whichBoard:int):void
+GEtColList(int columnO):List
+GetNameOrdinal(int coulumnO):string
+GetInProgress():List
+ setters



Aggregation: child can exist without the parent

Composition: child cannot exist without the parent

From Wikipedia

https://en.wikipedia.org/wiki/Class_diagram

Task

- Title(String)
- DueDate(String)
+ CREATION DATE(DateTime)
- Description(newBody: string): void
- State(int)
+ TaskID(int)

+ EditTitle(newTitle: string): void
+ EditDueDate(newDate: String): void
+ EditDescription(newBody: string): void
+ Getters
+ Setters

BoardController

- Boards: Dictionary<string,Dictionary<string, Board>

+UserHasAnyBoard(userEmail:string):bool
+ createBoard(userEmail:string,boardName:string): void
+ UserHasThisBoard(userEmail:string, boardName:string):bool
+ deleteBoard(userEmail:string ,boardName: String): void
+ GetAllInPrograss(userEmail:string):List<Task>
+ getBoard(userEmail:string ,boardName: String): Board