Software Design

Software Design Documentation

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CRC Cards

Backend

Class Name: User	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • stores user information • supplies CRUD operations on users	**Collaborators:** None

Class Name: Timeline	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • stores user’s skills and experiences with corresponding date • supplies CRUD operations on timeline	**Collaborators:** None

Class Name: Profile	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • stores user’s profile ◦ uses' email, description, etc. • supplies CRUD operations on user’s profile	**Collaborators:** None

Class Name: Tag
Parent Class: N/A **Subclasses:** N/A

Responsibilities	Collaborators:
• stores tags of users • supplies CRUD operations on tags	None

Class Name: UserTag	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• stores users and tags pairs • supplies CRUD operations on userTag	None

Class Name: Like	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• stores rate infromation • supplies CRUD operations on like	None

Class Name: Post	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• stores post information • supplies CRUD operations on posts	None

Services

Class Name: AccountService	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Manages HTTPS request for user login, logout, sign up/register. • Creates a profile for each user created. • Gives error if user inputs are invalid	User Profile

Class Name: ProfileService	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Manages HTTPS request for profile CRUD • Gives error if user inputs are invalid or user does not have permission to edit the profile • Manages HTTPS request for timeline CRUD	Profile Timeline Like

Class Name: TagService
Parent Class: N/A **Subclasses:** N/A

Responsibilities	**Collaborators:**
• Manages HTTPS request for tag CRUD	Tag UserTag

Class Name: PostService	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Manages HTTPS request for post CRUD. (Deleting post also means deleting comments associated with it)	Post

Frontend

Class Name: LoginPage	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Allows user to enter the user name and password to login in • Can link to sign up page and profile page • Gives alerts for failed login and invalid inputs	• SignupPage • ProfilePage • AccountService

Class Name: SignupPage	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Allows user to enter the email, password, user name and chose the identity to sign up • Can link to login page • Gives alerts for failed signup and invalid inputs	• LoginPage • AccountService

Class Name: ProfilePage	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Displays and allow edits to user profile, user tags, timeline, and posts	• ProfileService • PostService • TagService • Rating • TagProfileForm • MomentieTimeline • MomentiePost

Class Name: TagProfileForm	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities	**Collaborators:**
• Allows user to add and delete their tags	None

Class Name: MomentieTimeline

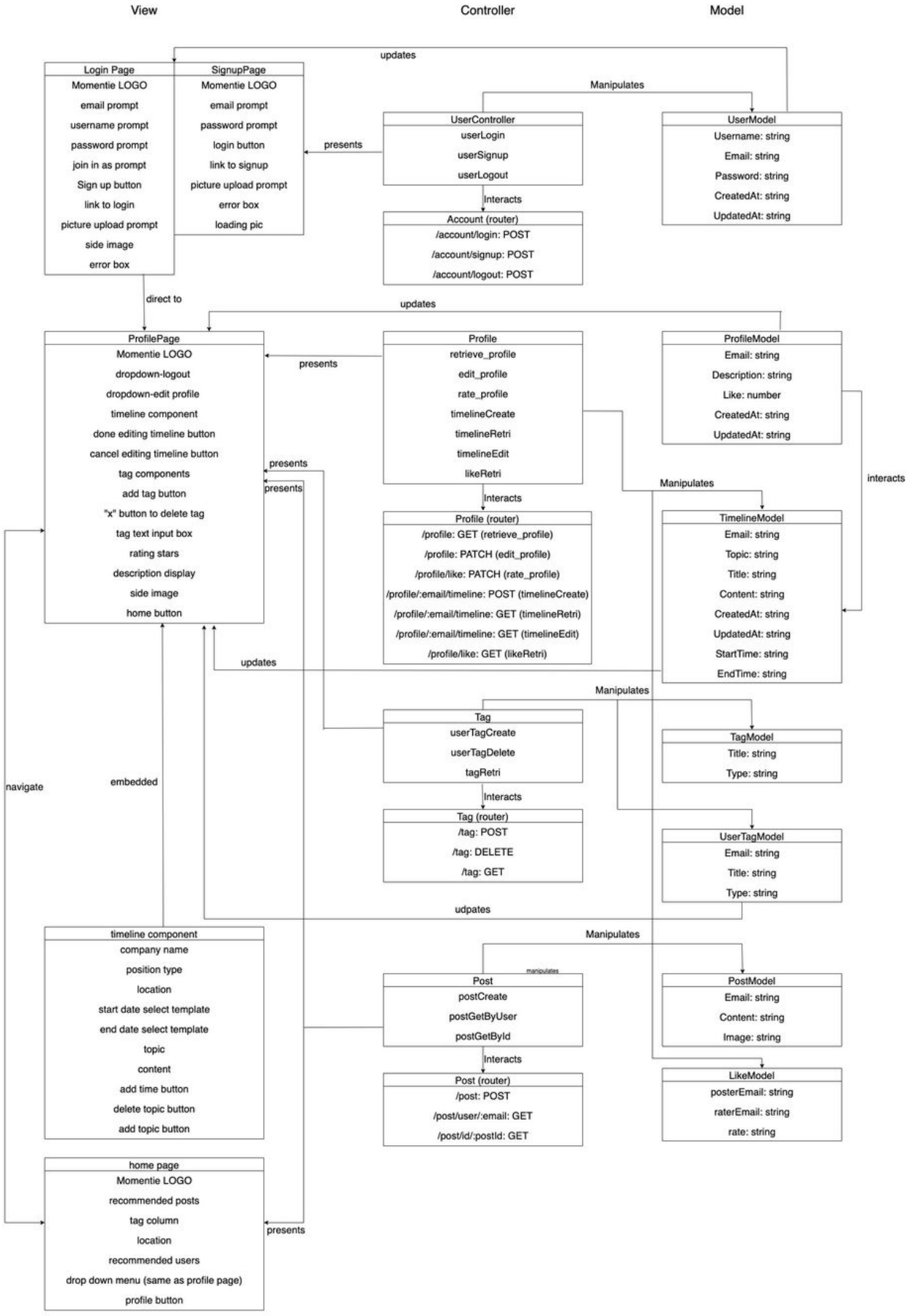
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • Displays and allows user to add, edit or delete on list of timelines	**Collaborators:** • MomentieTimelineItem

Class Name: MomentieTimelineItem	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • Displays and allows user to add, edit or delete an item of a timeline	**Collaborators:** None

Class Name: Rating	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • Displays a rating and allow user to edit the rating	**Collaborators:** None

Class Name: MomentiePost	
Parent Class: N/A **Subclasses:** N/A	
Responsibilities • Displays a list of posts	**Collaborators:** None

Software Architecture Diagram


View
Controller
Model
updates
Login Page
Momentie LOGO
email prompt
username prompt
password prompt
join in as prompt
Sign up button
link to login
picture upload prompt
side image
error box
SignupPage
Momentie LOGO
email prompt
password prompt
login button
link to signup
picture upload prompt
error box
loading pic
presents
Manipulates
UserController
userLogin
userSignup
userLogout
Interacts
Account (router)
/account/login: POST
/account/signup: POST
/account/logout: POST
UserModel
Username: string
Email: string
Password: string
CreatedAt: string
UpdatedAt: string
direct to
updates
ProfilePage
Momentie LOGO
dropdown-logout
dropdown-edit profile
timeline component
done editing timeline button
cancel editing timeline button
tag components
add tag button
"x" button to delete tag
tag text input box
rating stars
description display
side image
home button
presents
Profile
retrieve_profile
edit_profile
rate_profile
timelineCreate
timelineRetri
timelineEdit
likeRetri
Interacts
Profile (router)
/profile: GET (retrieve_profile)
/profile: PATCH (edit_profile)
/profile/like: PATCH (rate_profile)
/profile/:email/timeline: POST (timelineCreate)
/profile/:email/timeline: GET (timelineRetri)
/profile/:email/timeline: GET (timelineEdit)
/profile/like: GET (likeRetri)
ProfileModel
Email: string
Description: string
Like: number
CreatedAt: string
UpdatedAt: string
interacts
Manipulates
TimelineModel
Email: string
Topic: string
Title: string
Content: string
CreatedAt: string
UpdatedAt: string
StartTime: string
EndTime: string
updates
Manipulates
Tag
userTagCreate
userTagDelete
tagRetri
Interacts
Tag (router)
/tag: POST
/tag: DELETE
/tag: GET
TagModel
Title: string
Type: string
UserTagModel
Email: string
Title: string
Type: string
navigate
embedded
udpates
Manipulates
timeline component
company name
position type
location
start date select template
end date select template
topic
content
add time button
delete topic button
add topic button
manipulates
Post
postCreate
postGetByUser
postGetById
Interacts
Post (router)
/post: POST
/post/user/:email: GET
/post/id/:postId: GET
PostModel
Email: string
Content: string
Image: string
LikeModel
posterEmail: string
raterEmail: string
rate: string
home page
Momentie LOGO
recommended posts
tag column
location
recommended users
drop down menu (same as profile page)
profile button
presents

Meeting the MVC Spec.

> React is not really MVC, and we will take that into account
> Why isn't React considered MVC?

Introduction

For this project, this team is intending to use React as the front-end framework. React is only a front-end rendering library so that will be our view. Therefore, we classify our application as MVC as the View as React, Model as Mongodb, and Controller as the backend REST APIs.

Why exactly is this application MVC?

We consider the program as a whole to be MVC, rather than both Frontend and Backend both follow MVC.

We treat React as a pure user interface View. React will communicate with the Controller using HTTP requests. React best practices do not involve letting the controller tell it how to change the View. React Hooks are controllers and Components are Views. This means the Controller is separated into Frontend Controller and Backend Controller.

The Backend Controller then is our true controller. We use Express and its Route functionality to create RESTAPI. This allows the act of getting information from Model directly in View to be transferred to this Controller, thus fulfilling the backend part of the MVC.

The Model is done via Mongoose/MongoDB. We create schemas using Mongoose that provides query options for MongoDB collections. The Model is only used by the Controller and cannot change View directly, thus we follow MVC.

System Environment Expectation

We expect the operating system should be able to install the required Node environment mentioned in README. We communicate currently through the local host network. The system should also be able to interact with the internet and access MongoDB Atlas.