

CS4520/5520: Mobile Application Development

Weekly Assignment 7 (100 points)

Basic Instructions:

1. Submission details:

- a. The project name should be:
WA7_<Your_Last_Name>_<Last_4_digits_of_your_NUID>
- b. After building the project, right-click on the project from Project Navigator.
- c. Click on Show in Finder.
- d. Select all the files and folders, including the .xcworkspace file, and compress them to create a zip file.**
- e. Then, submit the zip file in Canvas.
- f. (Please read the “How to Submit the Assignments” from Modules -> Quick Links.)

Weekly Assignment 7

I will not provide you with any design for this assignment. You should carefully create a usable design with the elements you have learned. You can experiment with any other UI elements as well.

We will be building a Notes Application. We have a JSON API to work with here. The details for the API are given below.

API details:

Find the exported Postman collection on the assignment page for the following API and import it to start testing on your own. You can also create your Postman collection.

```
{"auth":true,"token":"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6IjY3MjE1Y2U2NWE5ZGExMjZmM1YWVjNCIsImIhdCI6MTczMDIzOTcxOCwiZXhwIjoxNzE2MTE4fQ.5SETPLI4kLcLN3aN0y4NruiTUs  
t9zDUSUufhyQ0Nzho"}
```

● Authentication API:

- Base URL: **http://apis.sakibnm.work:3000/api/auth/**
- Endpoints:
 - **Register an account**
 - **POST /register**
 - Body parameters (**x-www-form-urlencoded**)

- **Returns an authentication token: x-access-token**

- **POST** /login

- Body parameters (x-www-form-urlencoded)

- **Returns an authentication token: x-access-token**

- **GET** /me

1. Go to the Authorization tab in Postman.
 2. Choose Bearer Token from the Type dropdown.
- In the Token field, paste only the token part without any curly braces ({}) or additional JSON keys.

- Returns “_id,” “name,” “email,” and “__v”
 - “_id” is the userID.
 - “name” is the user name.
 - “email” is the user's email address.

- **GET** /logout

- No parameters

- Base URL: <http://apis.sakibnm.work:3000/api/note>

- Endpoints:

- **Get all notes for this user**

- **GET** /getall

- Header parameters
 - x-access-token
- Returns a list of notes in JSON format.

■ Add a new Note

■ POST /post

- Header parameters
 - x-access-token
- Body parameters
 - text (Note Text)
- Returns a JSON including userId, text, _id, and __v.
 - “_id” is the ID of the note.

■ Delete a Note

■ POST /delete

- Header parameters
 - x-access-token
- Body parameters
 - id (“_id” from the returned JSON from /post call)

You have to fulfill the following requirements to complete the assignment:

1. The user should be able to **register an account**.
2. The user should be able to log in and log out. The /logout API is dumb and does not work in the back end. So, you get to **remove the auth token from your app locally**.
3. The user should be able to **view their profile**.
4. The user should be able to **display all their notes**.
5. The user should be able to **add a new note**.

- a. *Optional: If you want to enable multiline user inputs, you can use `UITextView` instead of `UITextField`. Both are reasonably easy to set up. If you are interested, try `UITextView` in this project.*
6. The user should be able to delete any of their notes.
7. You should display the Login screen when the app loads up. If the user does not have an account, they should be able to go to the register screen from there.
8. Once the user is logged in, they should be able to see their saved notes.
- 9. Validations:**
 - a. The email should be valid.
 - b. While registering a new user, alert the user if the user already exists.
 - c. While logging in, alert the user if the user is not found or the password is wrong.
- 10. Extra Credit: If the user is already logged in and closes the app, they should not be logged out of the app automatically. Once the user opens the app again, they should be able to see their notes. Use UserDefaults to store the token so that you can keep it even when the app is not running. UserDefaults work like cookies.**

Note: Here, you can see that we extensively use header parameters in this API. In our examples, we have already learned how to use body parameters. You can easily add headers to the request using Alamofire. For example,

```
if let url = URL(string: "http://apis.sakibnm.work:3000/api/note/getall"){
    AF.request(url, method: .get,
               headers: [
                   "x-access-token": token
               ])
    .responseData(completionHandler: { response in
        ...
    })
}
```

If you need both header and body parameters (/post endpoint), add the 'parameters' dictionary first, then the 'headers' dictionary in the request.

Happy coding!