

**EXTR: A USER FRIENDLY MOBILE APPLICATION FOR
MONITORING AND MANAGING FINANCES
EXPENSES FOR ENHANCED BUDGETING**

IT-ELDROID1
84128, WED 10:30 AM-12:30 PM
84155, FRI 7:30-10:30 AM

by

FRANZ RUIE MORADA

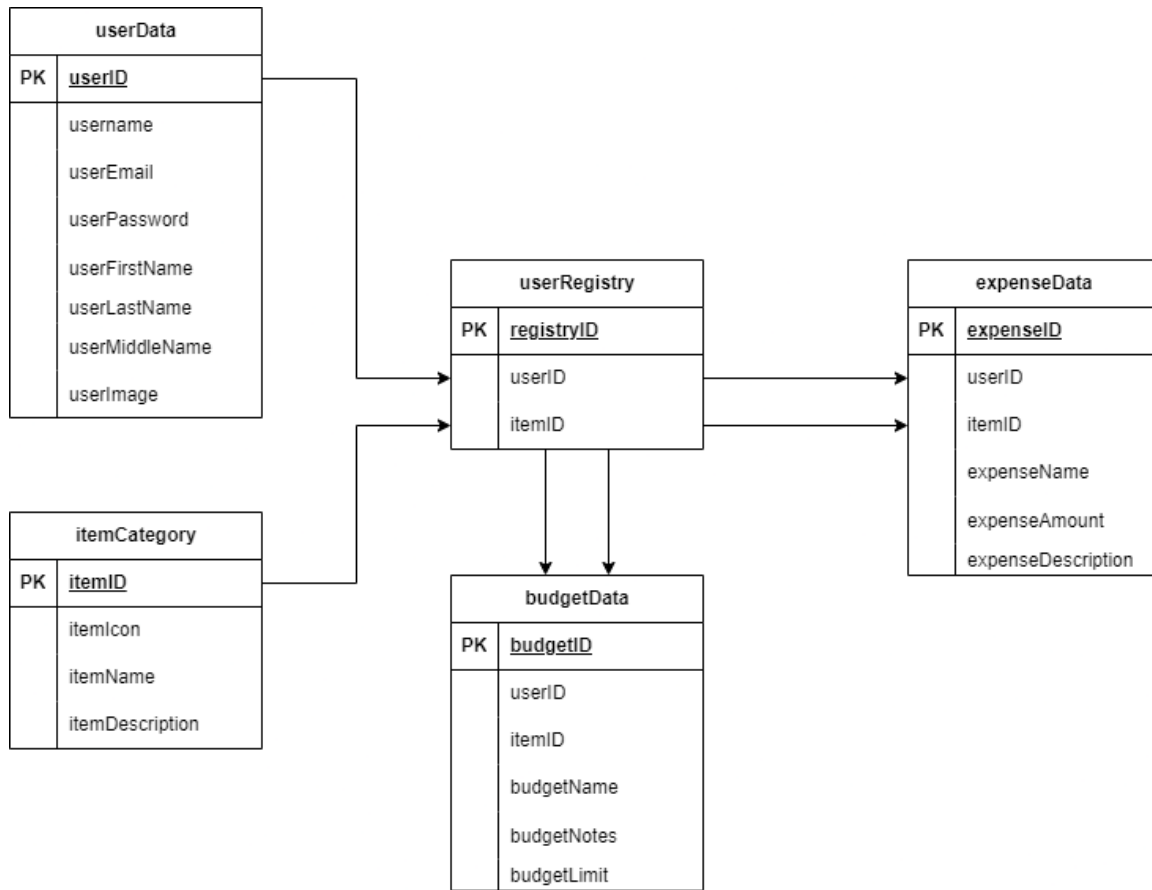
ALVIN JOHN ARANETA

KENNETH JAMES MACAS

JAYR OLORES

EDZ HENISSEY SON

ENTITY RELATIONSHIP DIAGRAM (ERD)



USE CASE DIAGRAM

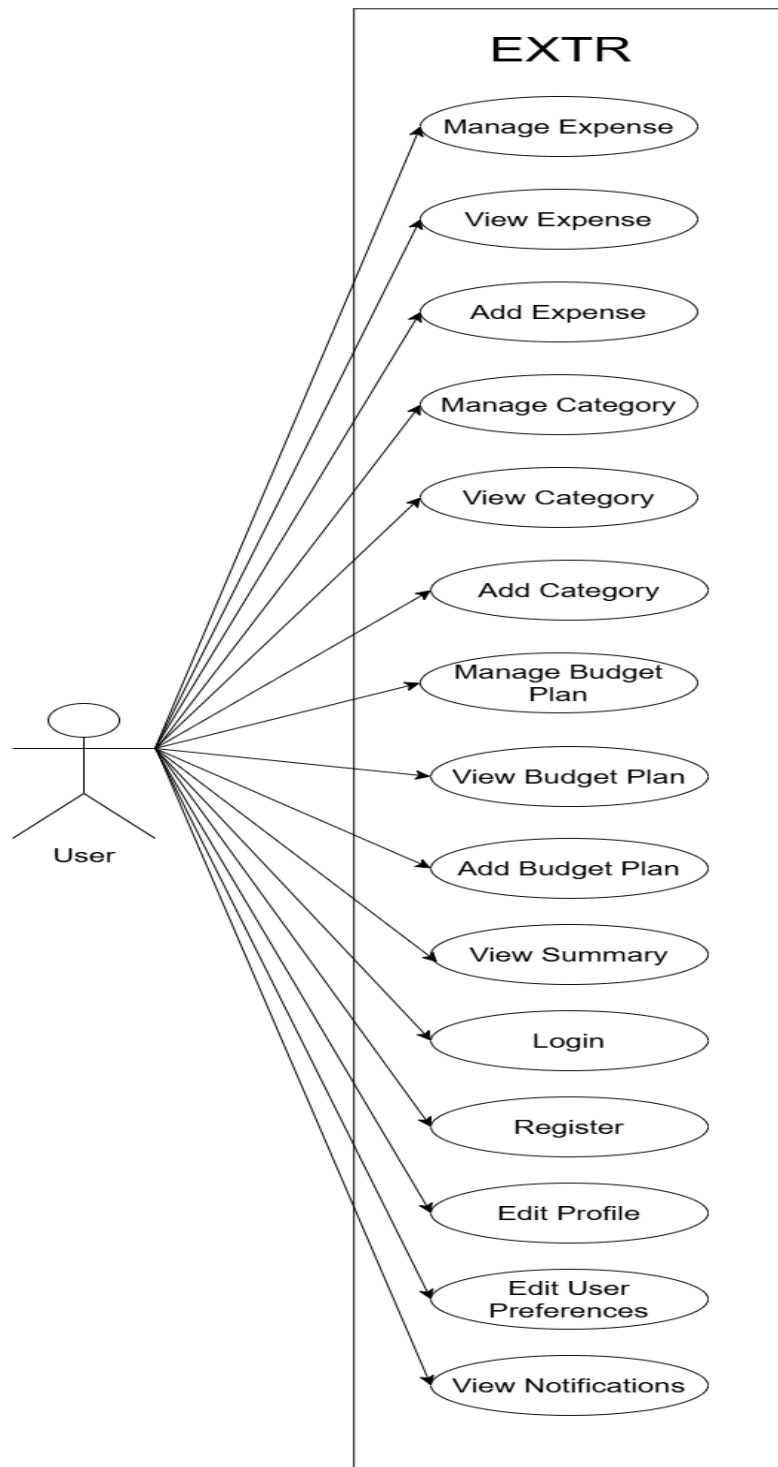
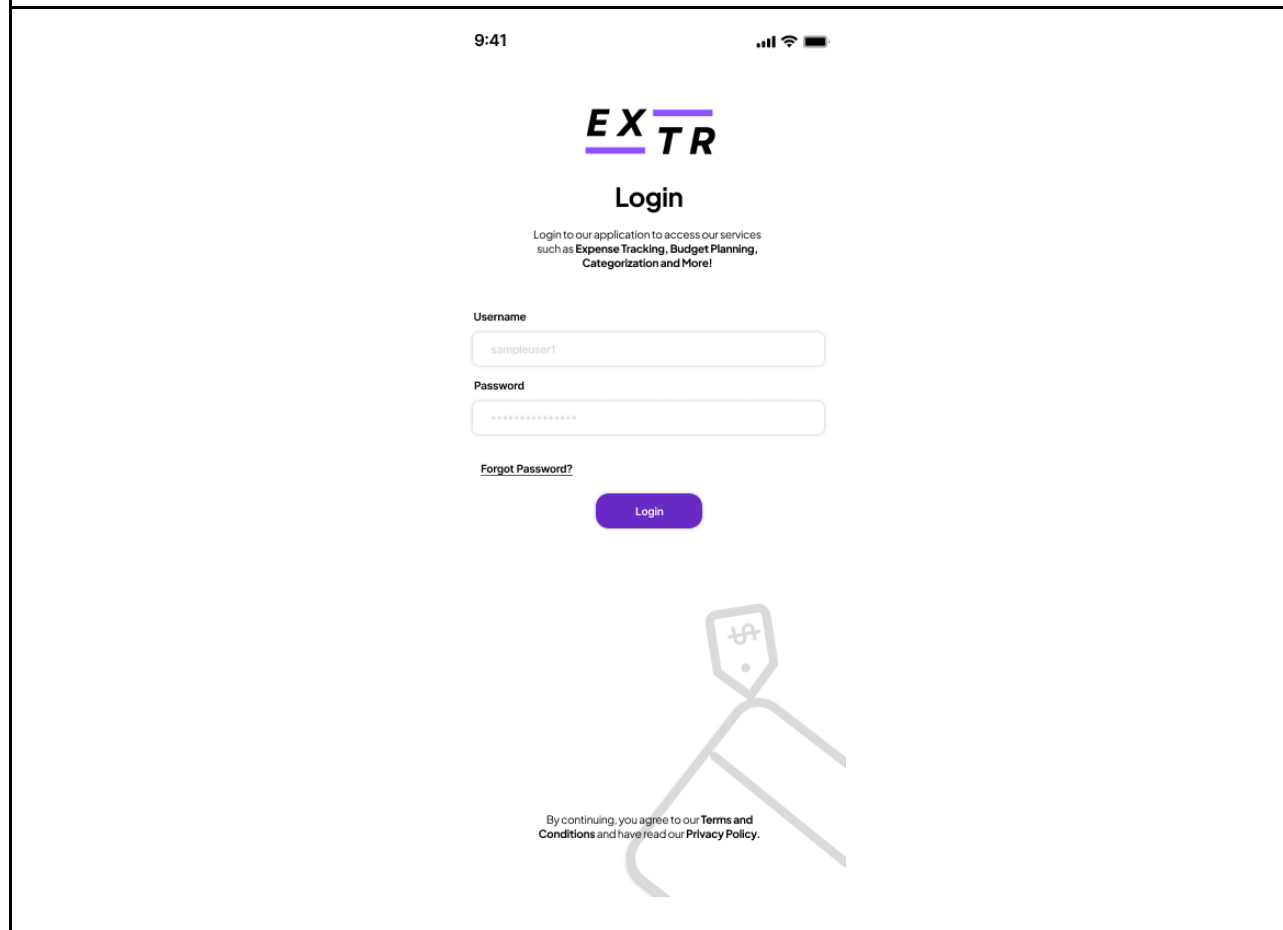


Figure 2 illustrates the use case diagram for the EXTR application, detailing the actor and their interactions within the system. The diagram includes

the user and their available functions, categorized into expense management, category management, and budget planning, among other system features. Users can manage expenses by adding, viewing, and editing them. Similarly, they can perform actions such as managing and adding expense categories. The application also allows users to handle budget plans, providing options to add, view, and manage these plans. Additional features include viewing summaries, logging in, registering, editing profiles, modifying user preferences, and viewing notifications. These interactions define the scope of user engagement within the EXTR system.

USER INTERFACE (UI) DESIGN

Login Screen

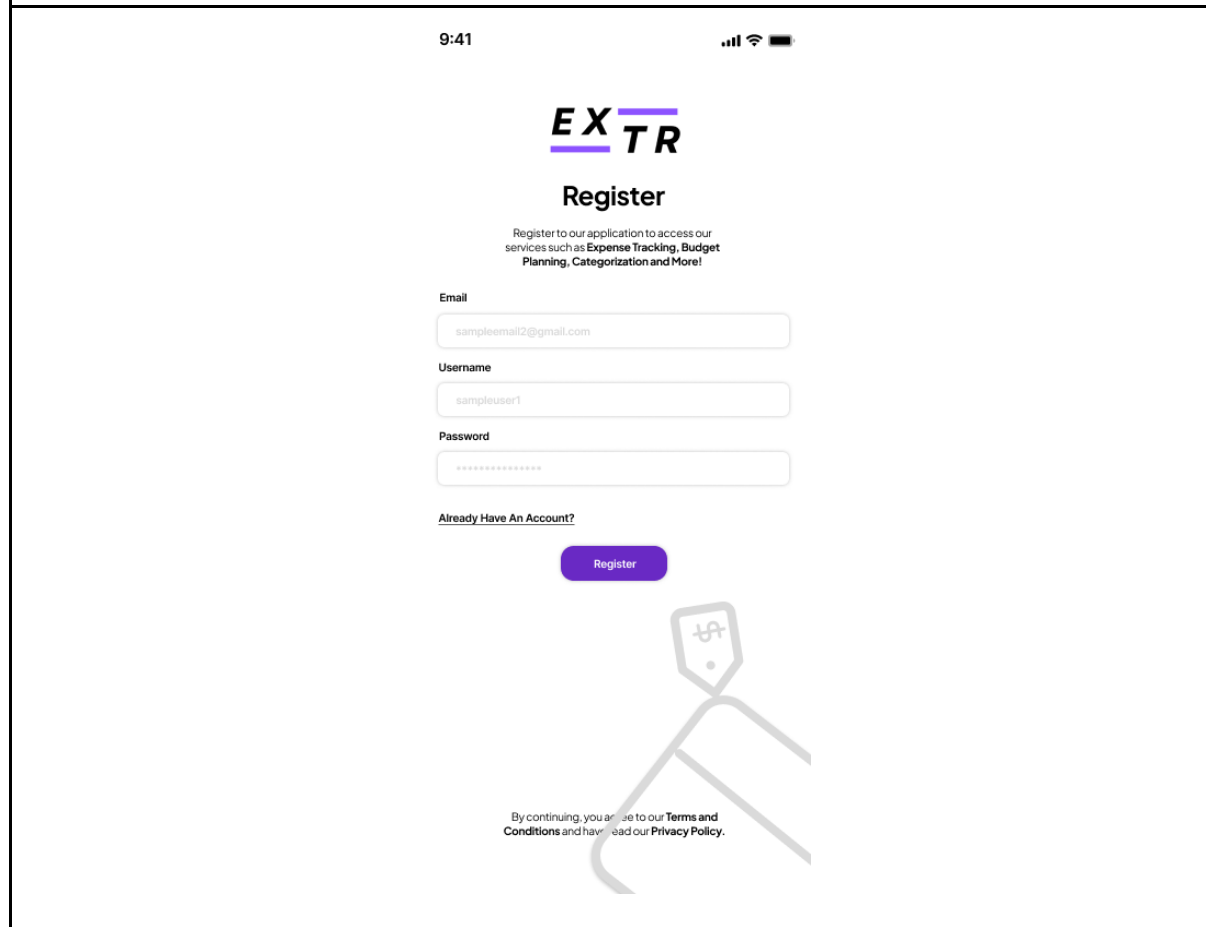


The mockup shows a mobile app login screen. At the top, the status bar displays the time 9:41, signal strength, Wi-Fi, and battery icons. The app logo 'EXTR' is centered, with 'EX' in black and 'TR' in purple. Below the logo is the word 'Login' in bold. A descriptive line of text reads: 'Login to our application to access our services such as Expense Tracking, Budget Planning, Categorization and More!'. The login form consists of two fields: 'Username' with the text 'sampleuser1' and 'Password' with masked characters. A link for 'Forgot Password?' is positioned below the password field. A purple 'Login' button is centered below the fields. At the bottom, there is a faint watermark of a person holding a smartphone and a line of text: 'By continuing, you agree to our Terms and Conditions and have read our Privacy Policy.'

	Description	Parameter, Datatype, and VariableName[Size]
App Logo	EXTR App Image Logo	
Login Text	Login Word Text Display	
Login Description Text	Login Description Text Display	
Username Text	Username Label Input Text Display	

Username Input	Username Input Edit Text	String username[50]
Password Text	Password Label Input Text Display	
Password Input	Password Input Edit Text	String password[32]
Forgot Password Text	Clickable Forgot Password Text Display	
Login Button	Signing in the user to use the Application Features	
Terms and Condition Text	Terms and Condition Text	

Register Screen



9:41

EXTR

Register

Register to our application to access our services such as Expense Tracking, Budget Planning, Categorization and More!

Email

sampleemail2@gmail.com

Username

sampleuser1

Password

[Already Have An Account?](#)




Register

By continuing, you agree to our [Terms and Conditions](#) and have read our [Privacy Policy](#).

	Description	Parameter
Register Text	Register Word Text Display	
Register Text Description	Register Description Text Display	
Email Text	Email Label Input Text Display	
Email Input	Username Input Edit Text	String email[60]
Username Text	Username Label Input Text Display	

Username Input	Username Input Edit Text	String username[50]
Password Text	Password Label Input Text Display	
Password Input	Password Input Edit Text	String password[32]
Existing Account Text	Clickable Existing Account Text Display	
Register Button	Registers the user with Form information	

Forgot Password Screen

9:41   

EXTR

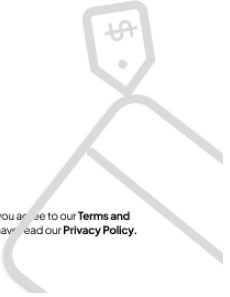
Forgot Password?

Make sure that the email is valid in order for us to send an email.

Email

[Go Back](#)

[Send](#)



By continuing, you agree to our [Terms and Conditions](#) and have read our [Privacy Policy](#).

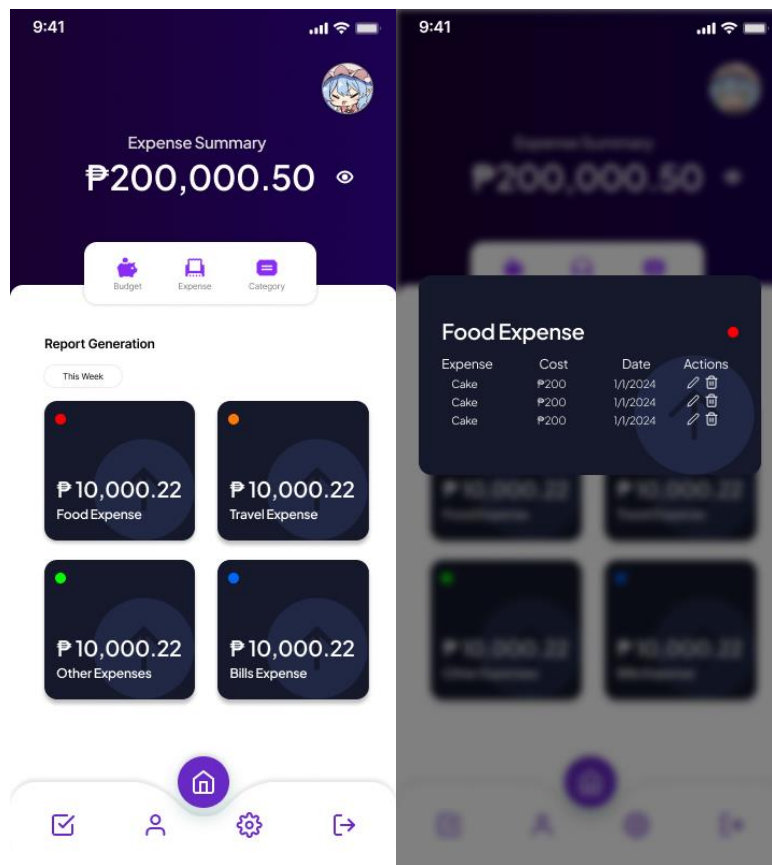
	Description	Parameter
Forgot Password Text	Forgot Password Text Display	
Forgot Password Text Description	Forgot Password Text Description Display	
Email Text	Email Label Input Text Display	
Email Input	Email Input Edit Text	String email[60]

Go Back Text	Clickable Go Back Text Display	
Send Button	Sends mail to the email for forgot password	

Verification Screen

<div><div>9:41<div><div></div><div></div><div></div></div><div></div></div></div> <div><div>EXTR</div><div><div>Verify Email</div><div>We have sent you an email for verification, please verify on your email.</div><div>Go Back</div></div><div><div><div></div></div><div>By continuing, you agree to our Terms and Conditions and have read our Privacy Policy.</div></div></div>		
	Description	Parameter
Verify Email Text	Verify Email Label Text Display	
Verify Email Text Description	Verify Email Input Edit Text	
Go Back Button	Goes Back to Login Screen	

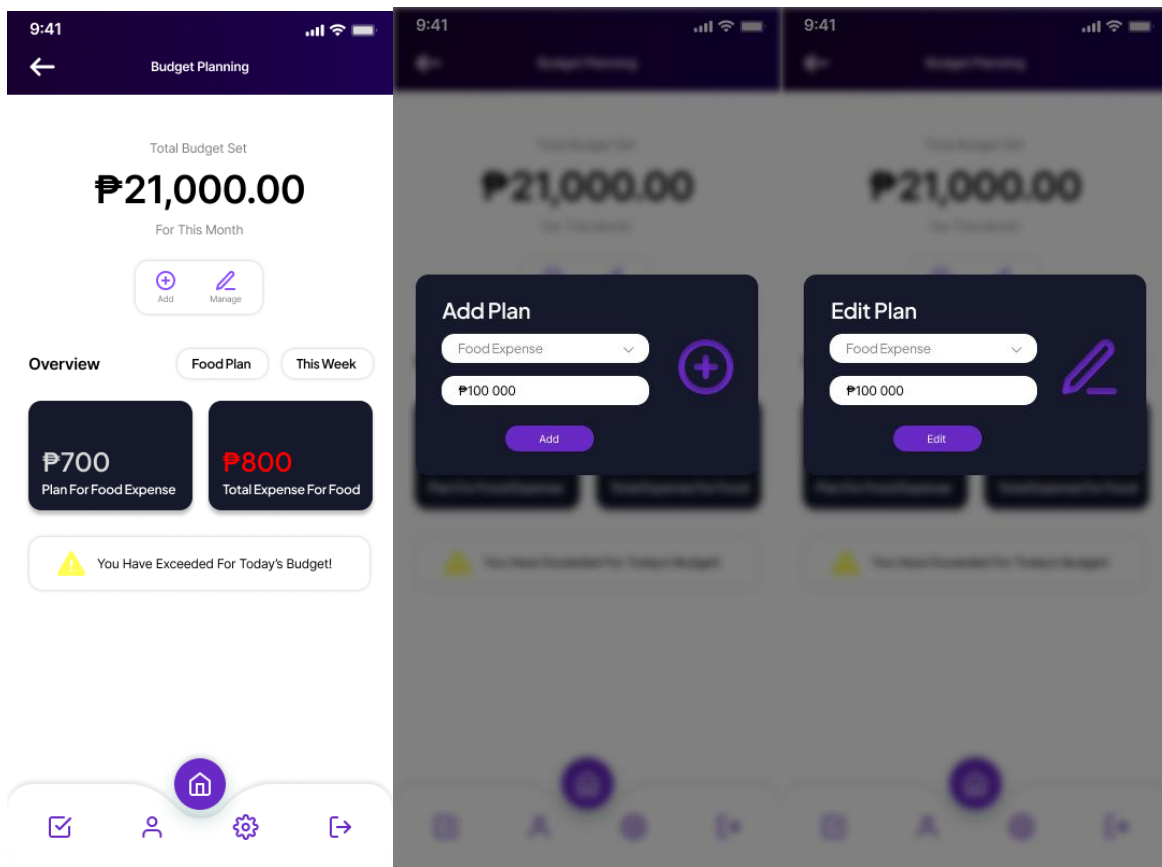
Basic Summary Screen



	Description	Parameter
Profile Image	User Profile Image Display	
Expense Summary Text	Expense Summary Label Text Display	
Expense Summary Value	Expense Summary Total Value Display	
Display Expense Value Image	Shows/Hides the Current Total Expense Summary Value	
Budget Button	Redirects to the Budget Planning Screen when clicked	

Expense Button	Redirects to the Expense Screen when clicked	
Category Button	Redirects to the Category Screen when clicked	
Report Generation Text	Report Generation Label Text Display	
Report Text Switcher	Switches to Daily/Weekly/Monthly Outputs	
Home Button	Redirects to Basic Summary Screen	
Expense Button	Redirects to Expense Screen	
Profile Button	Redirects to Profile Screen	
Settings Button	Redirects to Settings Screen	
Logout Button	Prompts User with Logout Message and Closes the application	
Expense Card View	Expense Display with Information	
Expense Title Text (Card View)	Title of the Card	
Expense RecyclerView (Card View)	List of Expenses Created	
Edit Expense Button (Card View)	To edit the value of the expenses created	
Delete Expense Button (Card View)	To remove the expense created	

Budget Planning Screen

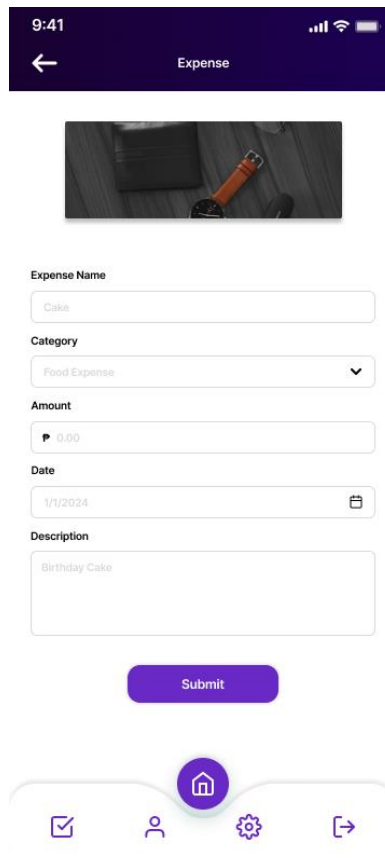


	Description	Parameter
Back Button	Returns Back to Basic Summary Screen	
Budget Planning Text	Title of the Screen Displayed	
Total Budget Text	Total Budget Label Text Display	
Total Budget Value	Displays the current total budget of the user	

Add Button	Add a budget plan on a specific expenses	
Manage Button	Edits the budget plan on a specific expenses	
Overview Text	Overview Label Text Display	
Plan Text Switcher	Switches to the available plan created by the user	
Report Text Switcher	Switches to Daily/Weekly/Monthly Budget	
Plan Budget Card View	Displays the Budget Plan Created by the User	
Current Expense Card View	Displays the Expenses by the User	
Warning Text	Displays only when the user exceeds the amount budget relative to expense	
Add Plan Title	Add Plan Label Text Display	
Category Spinner	Dropdown List of Created Categories	
Budget Value	User defined value for a budget	Float userbudget[99,999,999.99]
Add Button	Adds the budget plan	
Edit Plan Title	Edit Plan Label Text Display	

Current Budget Value	User defined value for a budget	Float userbudget[99,999,999.99]
Edit Button	Saves the budget plan changes	

Expense Screen

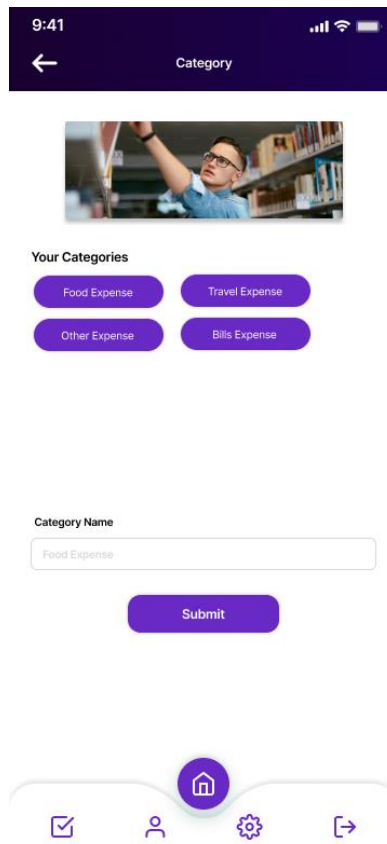


The image shows a mobile application screen for recording an expense. At the top, a dark purple header bar contains the time '9:41', a back arrow, and the title 'Expense'. Below the header is a placeholder image of a cake. The form consists of several fields: 'Expense Name' with the value 'Cake', 'Category' with a dropdown menu showing 'Food Expense', 'Amount' with a currency symbol and '0.00', 'Date' with a calendar icon and the value '1/1/2024', and 'Description' with the value 'Birthday Cake'. A purple 'Submit' button is located below the description field. At the bottom, there is a navigation bar with five icons: a checkmark, a person, a house (highlighted), a gear, and a share icon.

	Description	Parameter
Expenses Title Text	Screen Display Text Title	
Ad Image	Displays Expense Related Advertisement	
Expense Name Text	Expense Label Text Display	
Expense Name Input	Expense Value Edit Text	String expensename[30]

Category Text	Category Label Text Display	
Category Spinner	Dropdown List of Category created by the user	
Amount Text	Amount Label Text Display	
Amount Value	Amount Value Edit Text	Float userexpenset[99,999,999.99]
Date Text	Date Label Text Display	
Date Value	Date Input Edit Text	Date dateexpended [MM-dd-yyyy]
Description Text	Description Label Text Display	
Description Value	Description of the Expense Created	String expensesdesc[200]

Category Screen



	Description	Parameter
Category Text	Screen Title Text Display	
Your Categories Text	Categories Created Label Text Display	
Categories Button	Categories Displayed	
Category Name Text	Category Label Text View	
Category Value	Category Input Edit Text	String category[30]

Category Description Text	Category Label Text View	
Category Description Value	Category Input Edit Text	String categorydesc[200]
Submit Button	Creates a new category	

Profile Screen

	Description	Parameter
Profile Title Text	Screen Title Text Display	
Profile Image	User Profile Image Display	String profileimageresource[Max]
User Information Text	User Information Label Text Display	
Username Text	Username Label Text Display	
Username Value	Username Input Edit Text	String username[50]

Email Text	Email Label Text Display	
Email Value	Email Input Edit Text	String email[60]
Password Text	Password Label Text Display	
Old Password Value	Old Password Input Edit Text	String password[32]
New Password Value	New Password Input Edit Text	String newpassword[32]
Confirm Password Value	Confirm New Password Input Edit Text	String newpassword[32]

Settings Screen



	Description	Parameter
Settings Title Text	Screen Title Text Display	
Dark Mode Text	Dark Mode Label Text Display	
Dark Mode Switch	Switches to Dark Mode and Light Mode	

TEST CASES AND RESULT

FRONTEND TEST CASES					
Task #	Task Title	Action	Expected Result	Current Outcome	Status
1	Validate Login screen Visibility	1. Launch the app 2. Navigate to Login screen	User is navigated to Login screen and visible	User is navigated to Login screen and visible	PASSED
2	No username and password Login input	1. Click the Login button without input	An error message will display	Error message displayed "Username is required" and "Password is required"	PASSED
3	Register Email Invalid email	1. Navigate to Register Screen 2. Input invalid@ 3. Input the rest of fields 4. Click register button	An error message will display	Error message displayed "Invalid email address"	PASSED
4	Existing Account Text	1. Click on "Already Have An Account" link.	Redirects back to the Login screen.	User redirects to Login screen	PASSED
5	Forgot Email Send Button	1. Click the Send button after entering an email.	Sends reset email and shows email sent toast	User redirects to Login screen together with a toast message	PASSED
6	Click Go Back Text in Forgot Password Screen	1. Click on "Go Back" link.	Returns to the Login screen.	User navigated back to the Login screen.	PASSED
7	Click Go back button in Verify Email Screen	1. Click the Go Back button.	Returns to the Login screen.	User navigated back to the Login screen.	PASSED
8	Login state function frontend	1. Exit the app directly 2. Relaunch the app	Returns to Home	User is navigated directly to Home	PASSED
9	Navigation of Budget Button	1. Click the Budget button.	Redirects to the Budget Planning screen.	Redirects user to the Budget Planning screen.	PASSED
10	Navigation of Expense Button	1. Click the Expense button.	Redirects to the Expense screen.	Redirects user to the Expense screen.	PASSED
11	Navigation of Category Button	1. Click the Category button.	Redirects to the Category screen.	Redirects user to the Category screen.	PASSED
12	Navigation of Profile Button	1. Click the Profile button.	Redirects to the Profile screen.	Redirects user to the Profile screen.	PASSED

13	Logout Button	1. Click the Logout button.	Prompts user with a logout confirmation message.	Prompt the user a confirmation dialog message	PASSED
14	Expense Card View	1. Click on an expense card.	Opens overlay displaying detailed expense information.	Opens overlay displaying detailed expense information.	PASSED
15	Edit Expense Button (Card View)	1. Click the Edit Expense button on a card.	Opens overlay to edit expense details.	Opens overlay to edit expense details.	PASSED
16	Delete Expense Button (Card View)	1. Click the Delete button on a card.	Prompts for confirmation before deletion.	Prompts for confirmation before deletion.	PASSED
17	Add Button	1. Click the Add button.	Opens overlay to add a new budget plan.	Opens overlay to add a new budget plan.	PASSED
18	Manage Button	1. Click the Manage button.	Opens overlay to edit an existing budget plan.	Opens overlay to edit an existing budget plan.	PASSED
19	Category Spinner	1. Click the Category Spinner	Shows all created categories by the user and the default value must be none.	Display all the categories fetched by userId	PASSED
20	Date Value	1. Clicks the Edit Text	Displays a Calendar View and Outputs a Date Value on the Edit Text	Displays a Calendar View and Outputs a Date Value on the Edit Text	PASSED
21	Description Value	1. Input a long text	The Edit Text should wrap the text input with a maximum line of 5	The Edit Text should wrap the text input with a maximum line of 5	PASSED
22	Submit Button	1. Click Submit button with Category Name Value	Displays the new Category Created by the user	Displays the new Category Created by the user	PASSED
23	Username Value	1. Edit Username with 2 characters	Display an error message	Displays an error message stating "Username must be at least 3 characters"	PASSED
24	Email Value	1. Edit email with invalid input	Display an error message	Error message displayed "Invalid email address"	PASSED
25	Old Password Value	1. Clicks Submit Button on Profile Screen	Should validation error the input value if its the same with the current user password	Should validation error the input value if its the same with the current user password	PASSED

26	New Password Value	2. Clicks Submit Button on Profile Screen	Should validation error that the password input is not the same with the previous password	Should validation error that the password input is not the same with the previous password	PASSED
27	Confirm New Password Value	3. Clicks Submit Button on Profile Screen	Should validation error that the password is the same with the new password value	Should validation error that the password is the same with the new password value	PASSED

BACKEND TEST CASES					
Auth Management					
Task #	Task Title	Action	Expected Result	Current Outcome	Status
1	User Registration	1. Input valid email	Display toast stating "User registered successfully..." and navigated to Verify Email Screen	Display toast stating "User registered successfully..." and navigated to Verify Email Screen	PASSED
		2. Input valid username			
		3. Input password with a minimum of 6 characters			
		4. Click Registration Button			
2	User Login Failed	1. Login with non-existent username	An error message will display	Error message displayed "Username not found"	PASSED
		2. Click Login button			
3	Forgot Password Send Email Failed	1. Input non-existent email	An error message will display	Error message displayed "Email not found"	PASSED
		2. Click Send Button			
4	Forgot Email Send Button	2. Click the Send button after entering an email.	Sends reset email and shows email sent toast	User redirects to Login screen together with a toast message	PASSED
Category Management					
1	Add Duplicate Category Entry	1. Add a category with the same entry	An error message will display	Error message displayed "Category Already Exists." handle by toast	PASSED
		2. Click submit button			
2	Add a category entry	1. Add a unique category entry	A success message will display	Success message displayed "Category added successfully!." handle by	PASSED
		2. Click submit button			

				toast and the added category is displayed in the recycler view	
3	Edit a category entry	1. Click the item list	A success message will display	Success message displayed “Category edited successfully!” handle by toast and the added category is displayed in the recycler view	PASSED
		2. Input a new valid value			
		3. Click save			
4	Delete a category entry	1. Click the item list	A success message will display and dis	Success message displayed “Category deleted successfully!” handle by toast and the remove category in the recycler view	PASSED
		2. Click delete			
Expense Management					
1	Add Expense with valid data including expense name, description, category title, amount, and date	1. Navigate to Add expense screen	A success message will display	Success message displayed handle by toast and the added expense is displayed in a list	PASSED
		2. Add valid data			
		3. Click submit button			
2	Retrieve Expense	1. Navigate to Basic Summary Screen	It will render the budget added by the user	It will render the budget added by the user	PASSED

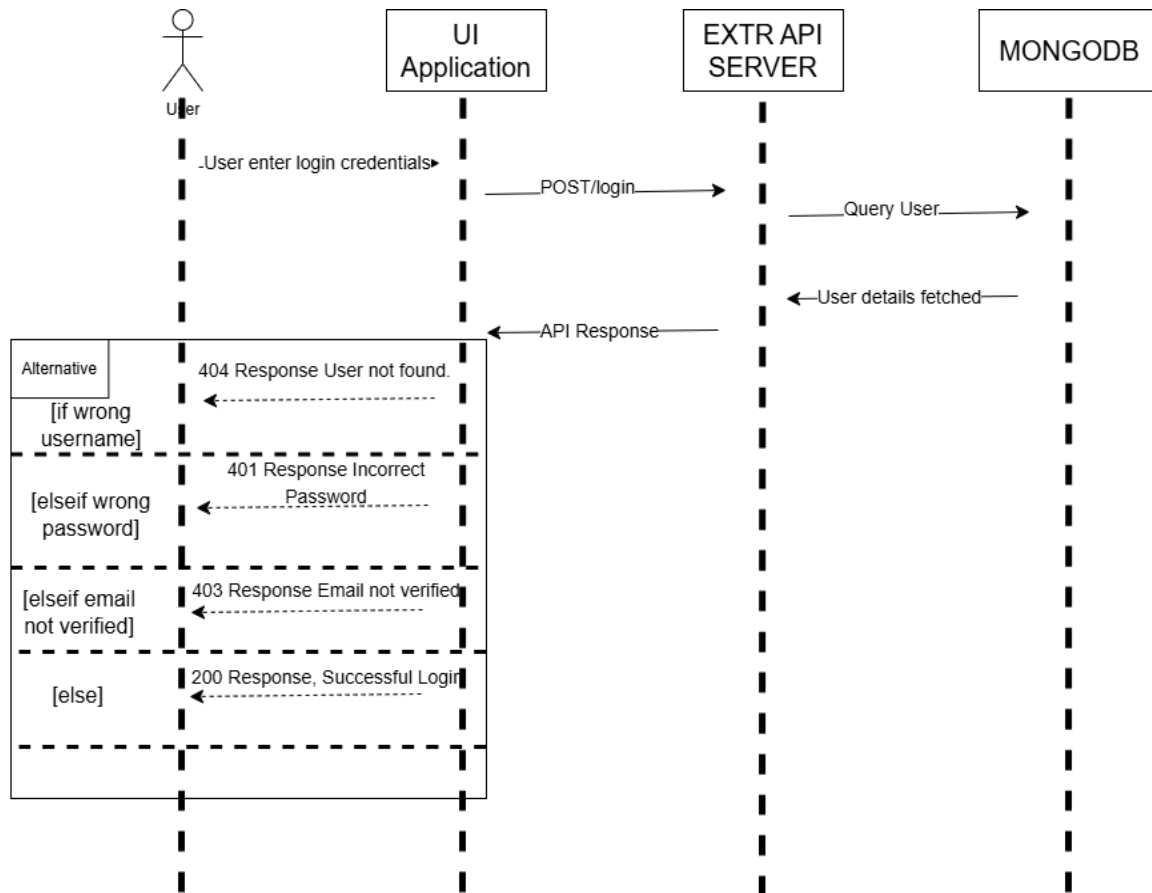
3	Update an Expense	1. Navigate to Basic Summary Screen	It will render a the updated expense for the user and a success message will display		PENDING
		2. Click a specific expense card			
		3. Click the edit icon and submit			
4	Delete an Expense	1. Navigate to Basic Summary Screen	It will remove the specific expense for the user and a success message will display		PENDING
		2. Click a specific expense card			
		3. Click the trash icon and submit			
Budget Management					
1	Add Budget	1. Navigate to budget planning screen	A success message will display and the budget will be updated in the views	A success message will display and the budget will be updated in the views	PASSED
		2. Click the add button			
		3. Choose a specific category and add a specific budget			
		4. Click the Add button			
2	Retrieve Budget data and display it on a card	1. Navigate to budget planning screen	It will render the budget added by the user	Render the total budget amount of the user	PASSED
3	Update Budget on a specific category	1. Navigate to budget planning screen	It will render a the updated budget for the user and a		PENDING
		2. Click the			

		manage button	success message will display		
		3. Choose a specific category and update a specific budget			
		4. Click the Edit button			
4	Delete Budget on a specific category	1. Navigate to budget planning screen			
		2. Click the manage button			
		3. Choose a specific category and update a specific budget			
		4. Click the Delete button	It will remove the specific budget for the user and a success message will display		PENDING
Profile Management					
1	User updates the username	1. Navigate to Profile screen	Username will be updated	Username updates	PASSED

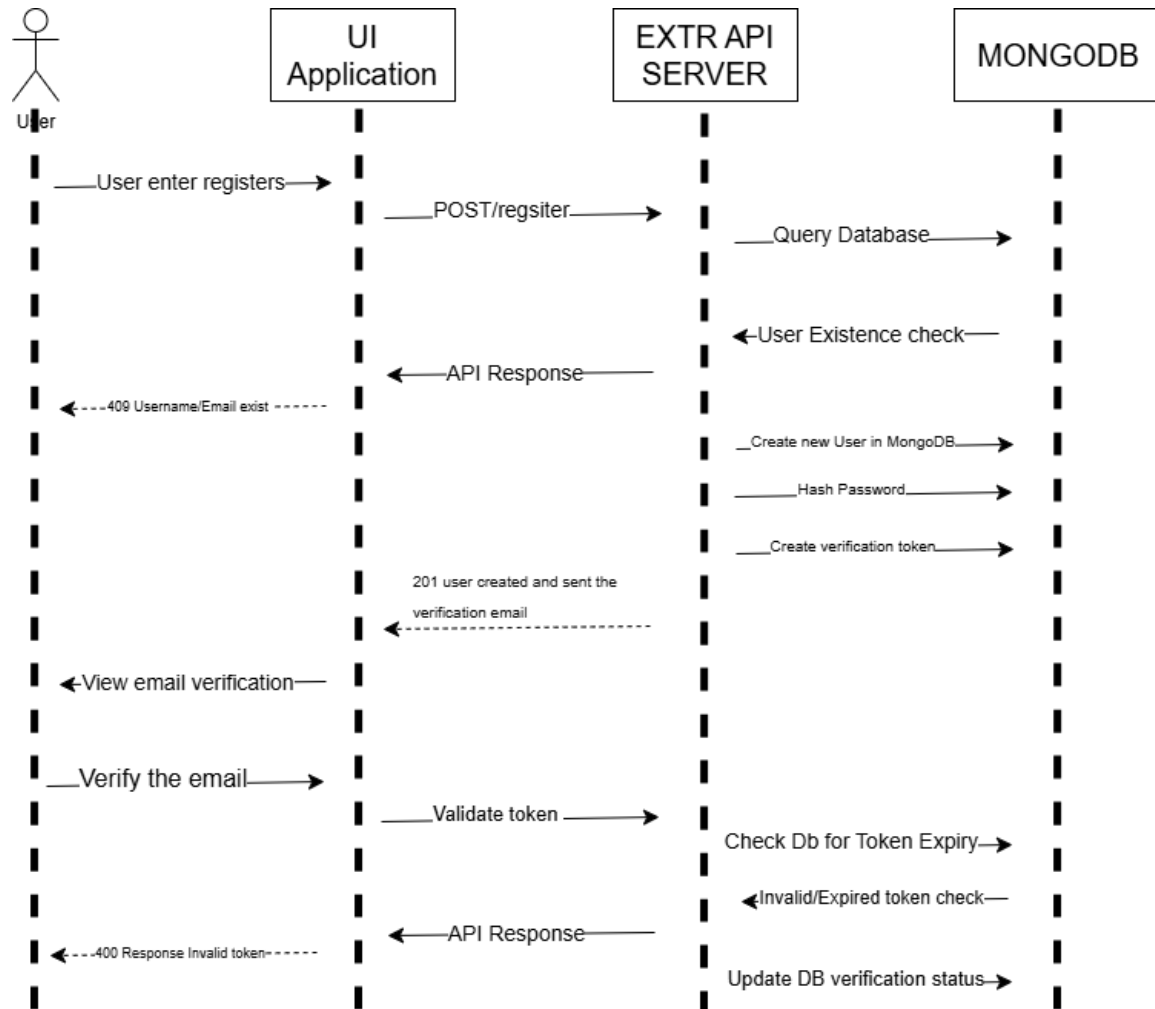
		1. Inputs the new username at the username input field	and a success message will display	successfully and a success message handled by a toast stating "Successfully updated user details"	
		1. Click the submit button			
2	User updates the email	1. Navigate to Profile screen	Email will be updated and a success message will display, In the DB on the other hand the verification will be reverted to false	Email updates successfully and a success message handled by a toast stating "Successfully updated user details" and sent a verification email	PASSED
		1. Inputs the new username at the username input field			
		1. Click the submit button			
3	User updates the password	1. Navigate to Profile Screen	Password will be updated and a success message will display	Password updates successfully and a success message handled by a toast stating "Successfully updated user details"	PASSED
		1. Input the old password and the new password in the field			
		1. Click the submit button			

SEQUENCE DIAGRAM

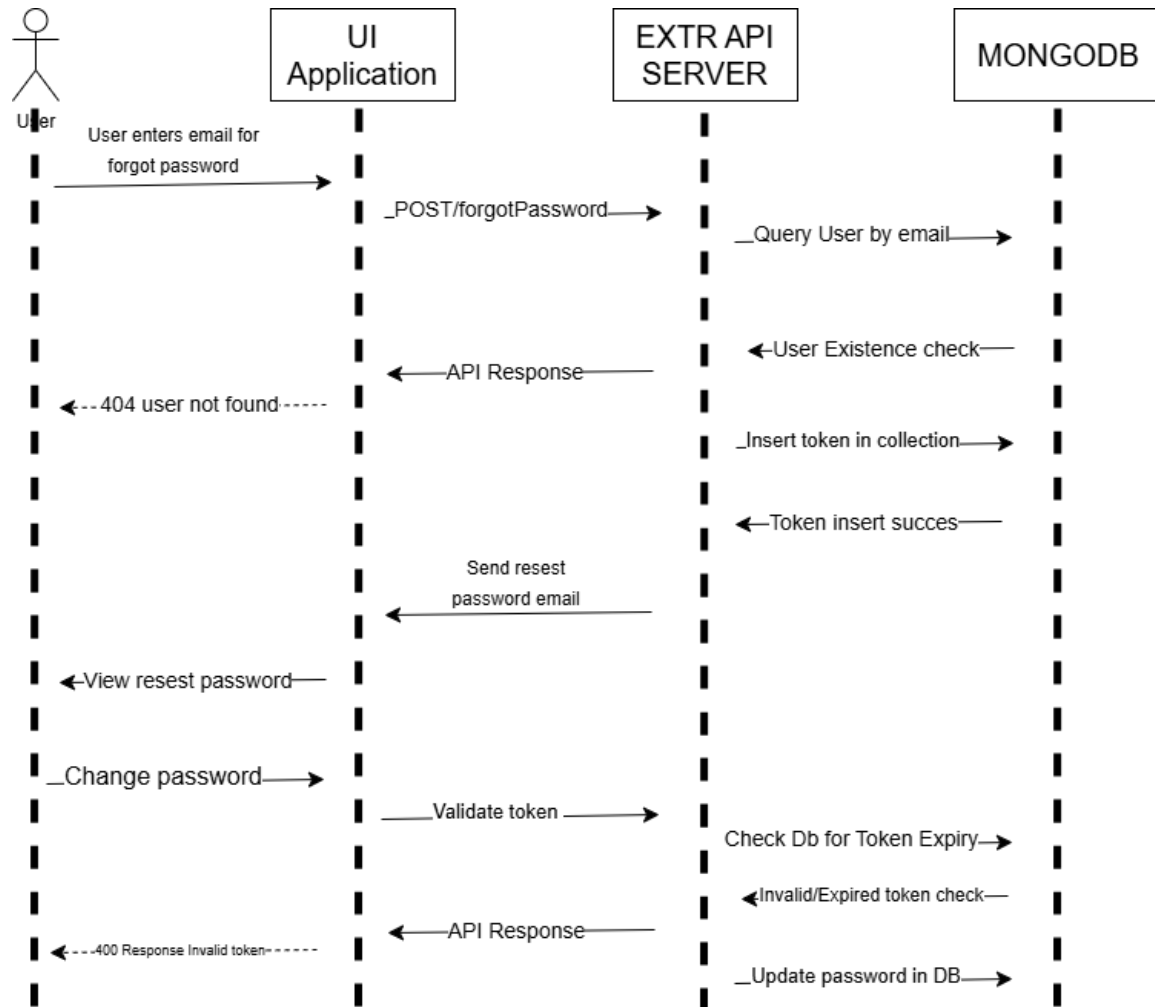
POST/login



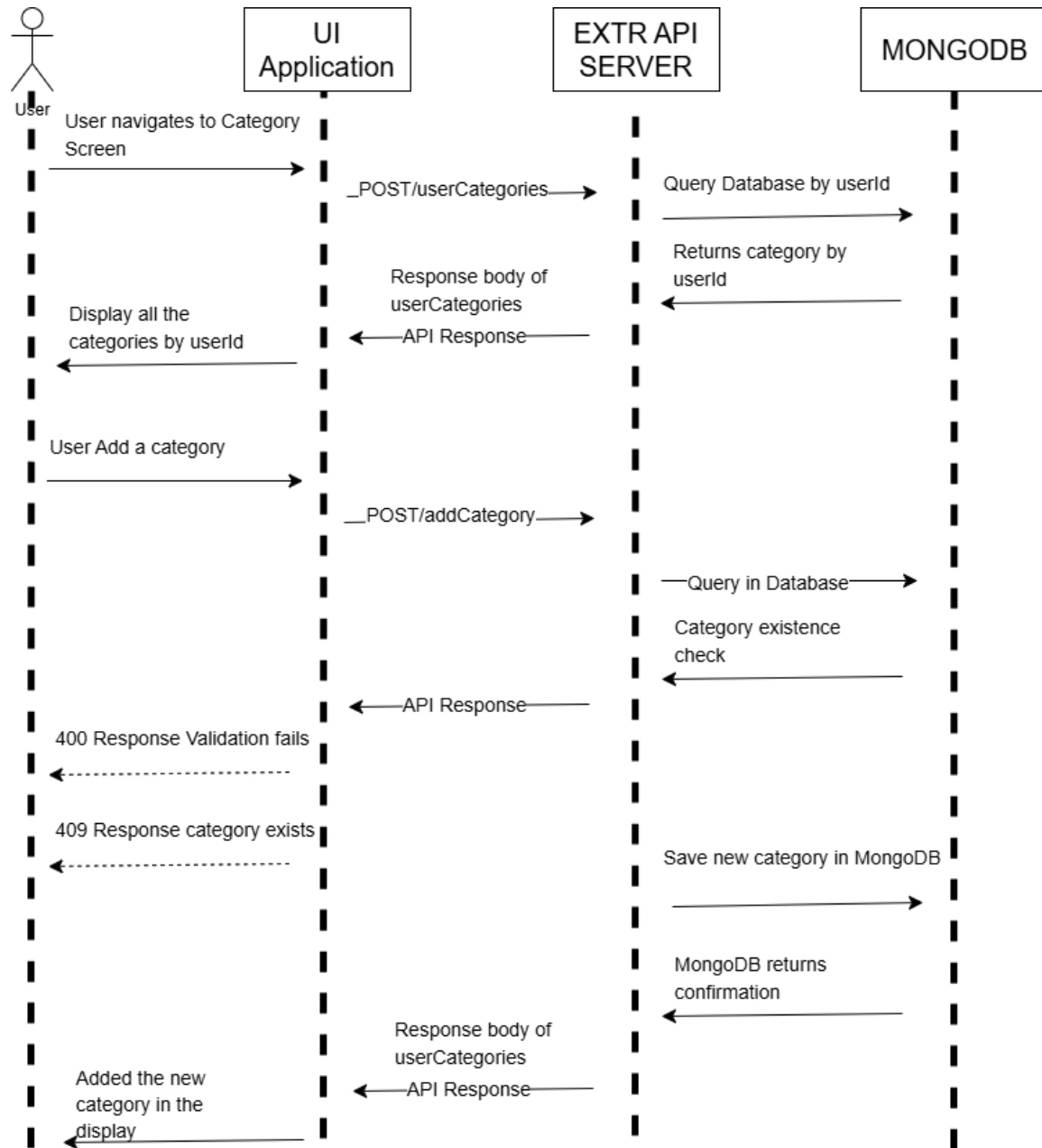
POST/register



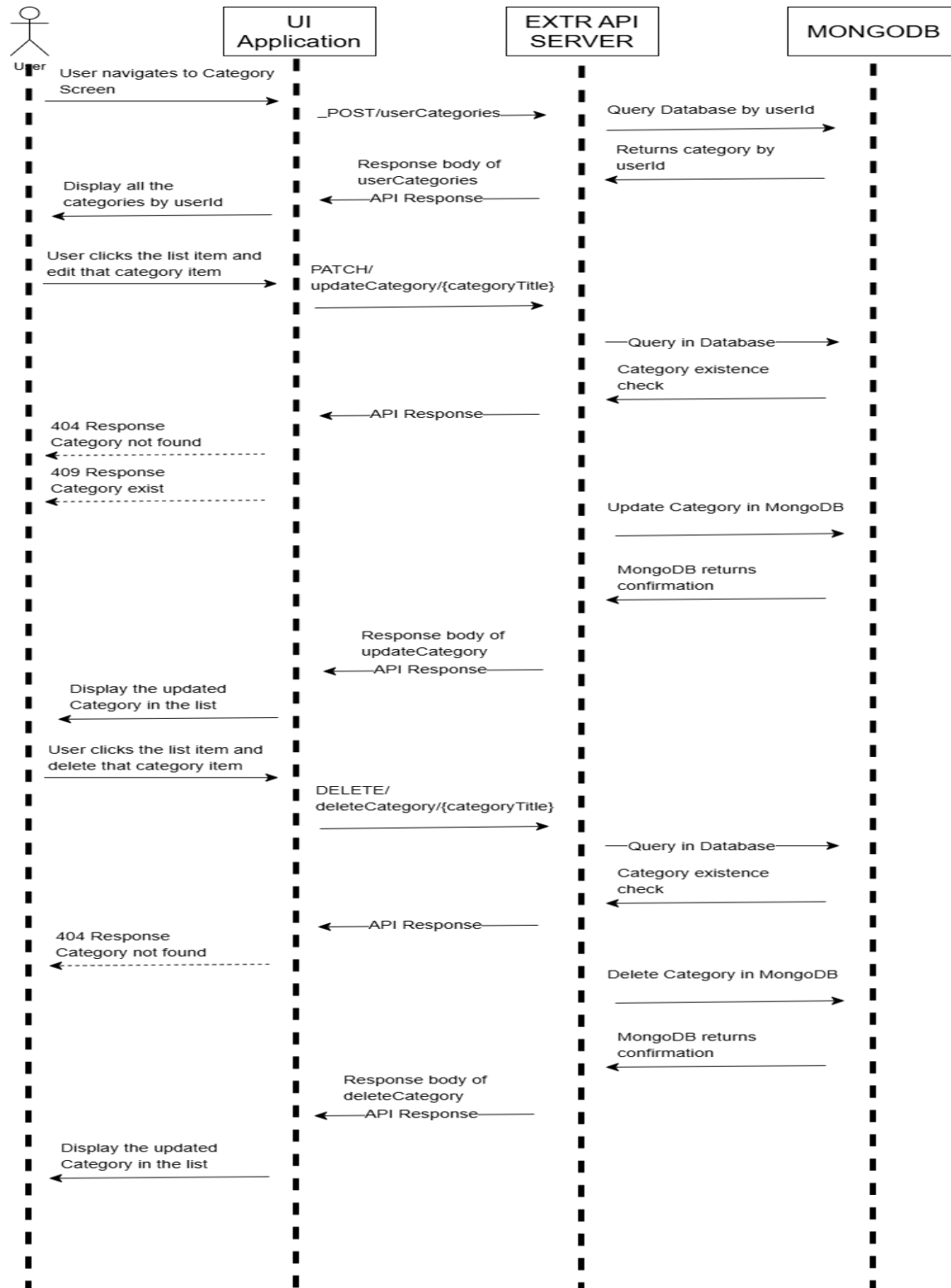
POST/forgotPassword



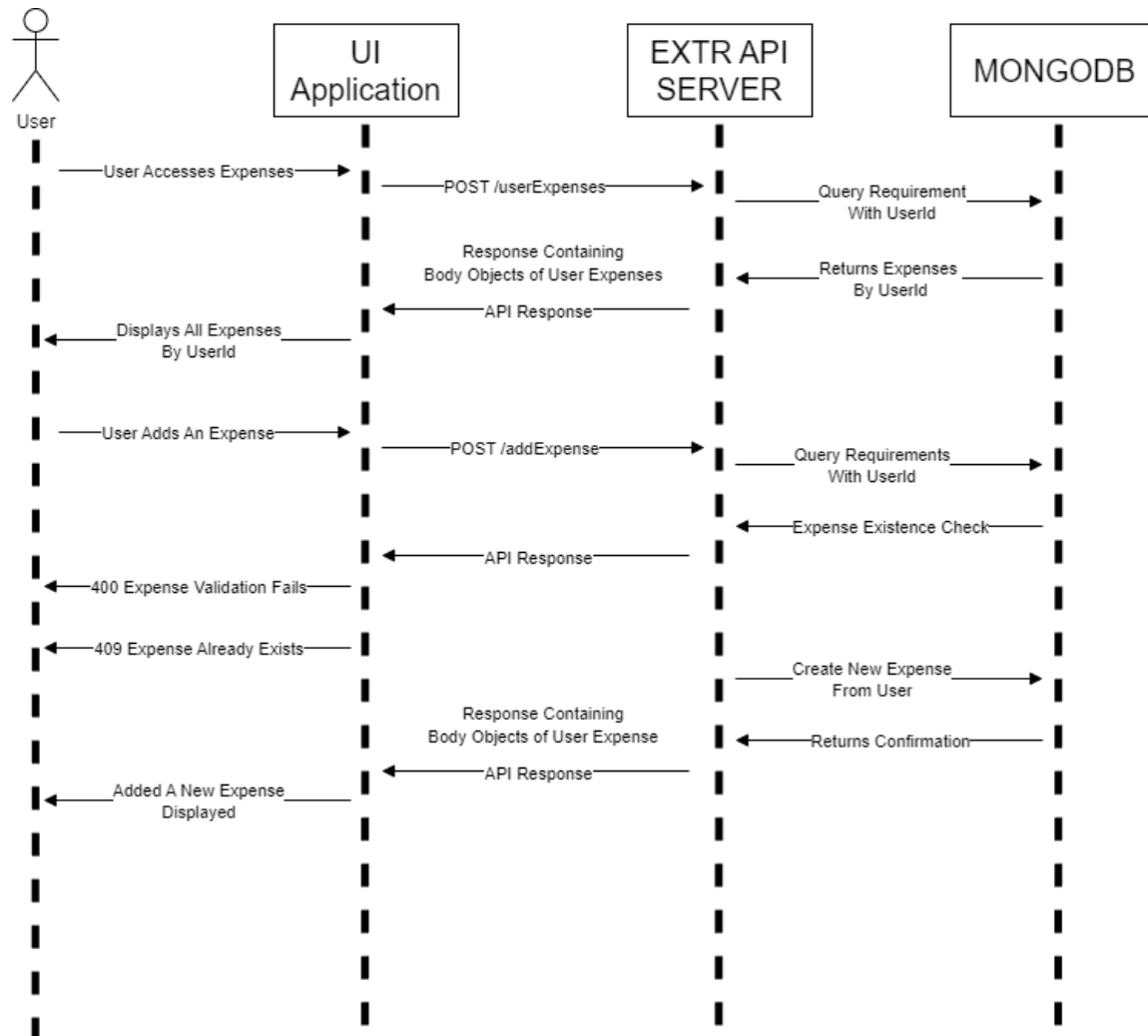
GET/userCategories and POST/addCategory/{categoryTitle}



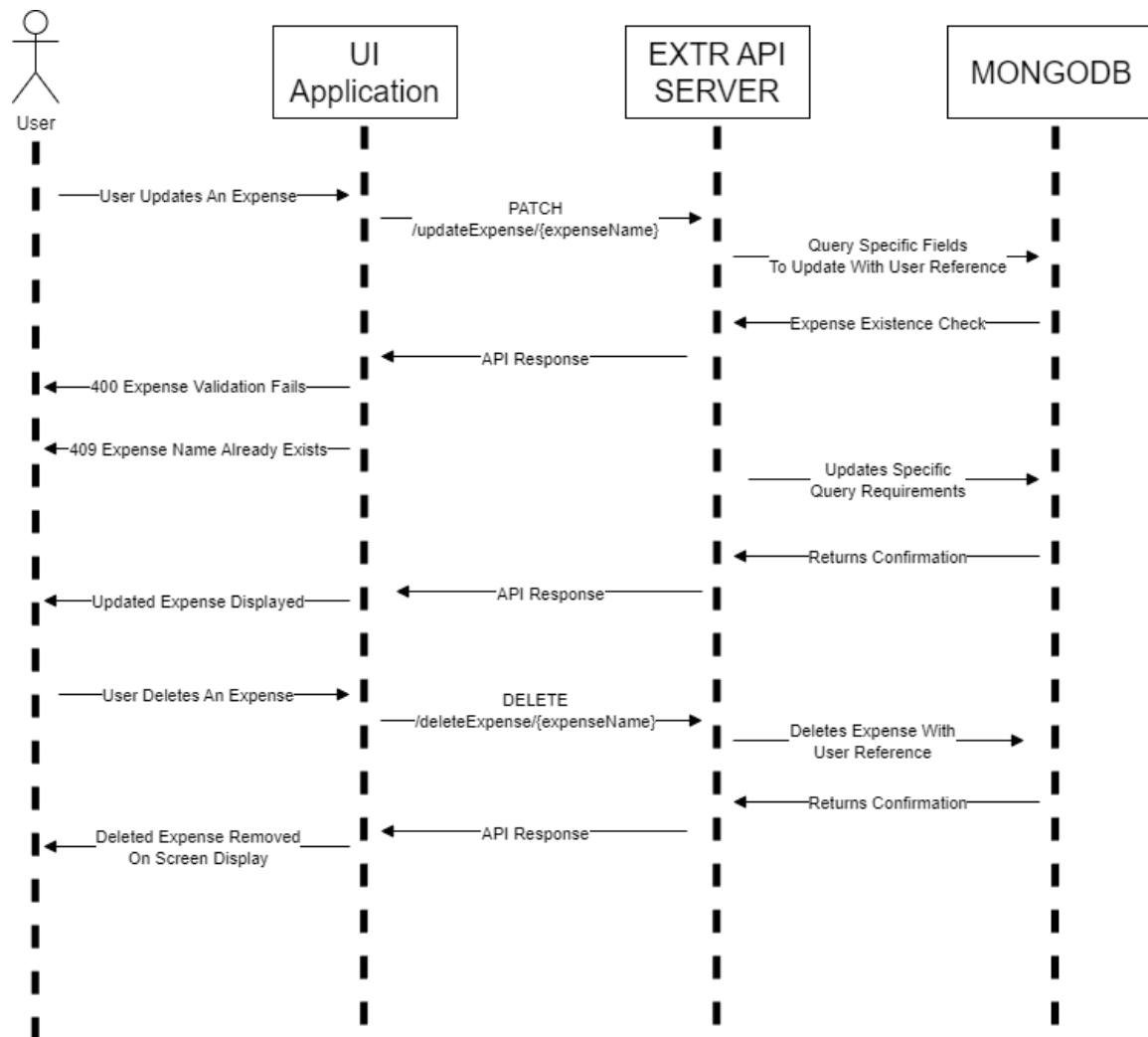
PATCH/updateCategory/{categoryTitle} and DELETE/deleteCategory/{categoryTitle}



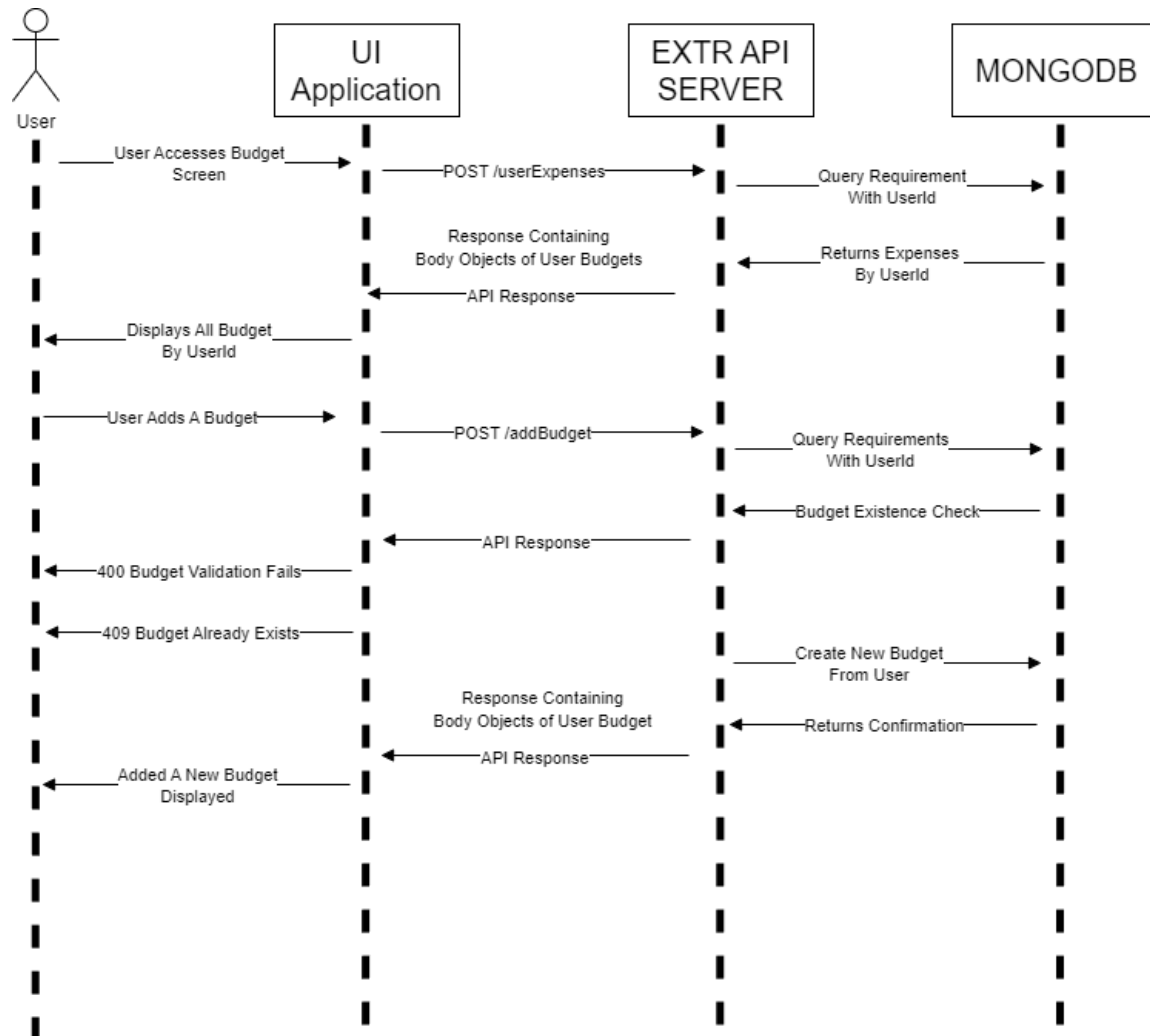
GET/userExpenses and POST/addExpense



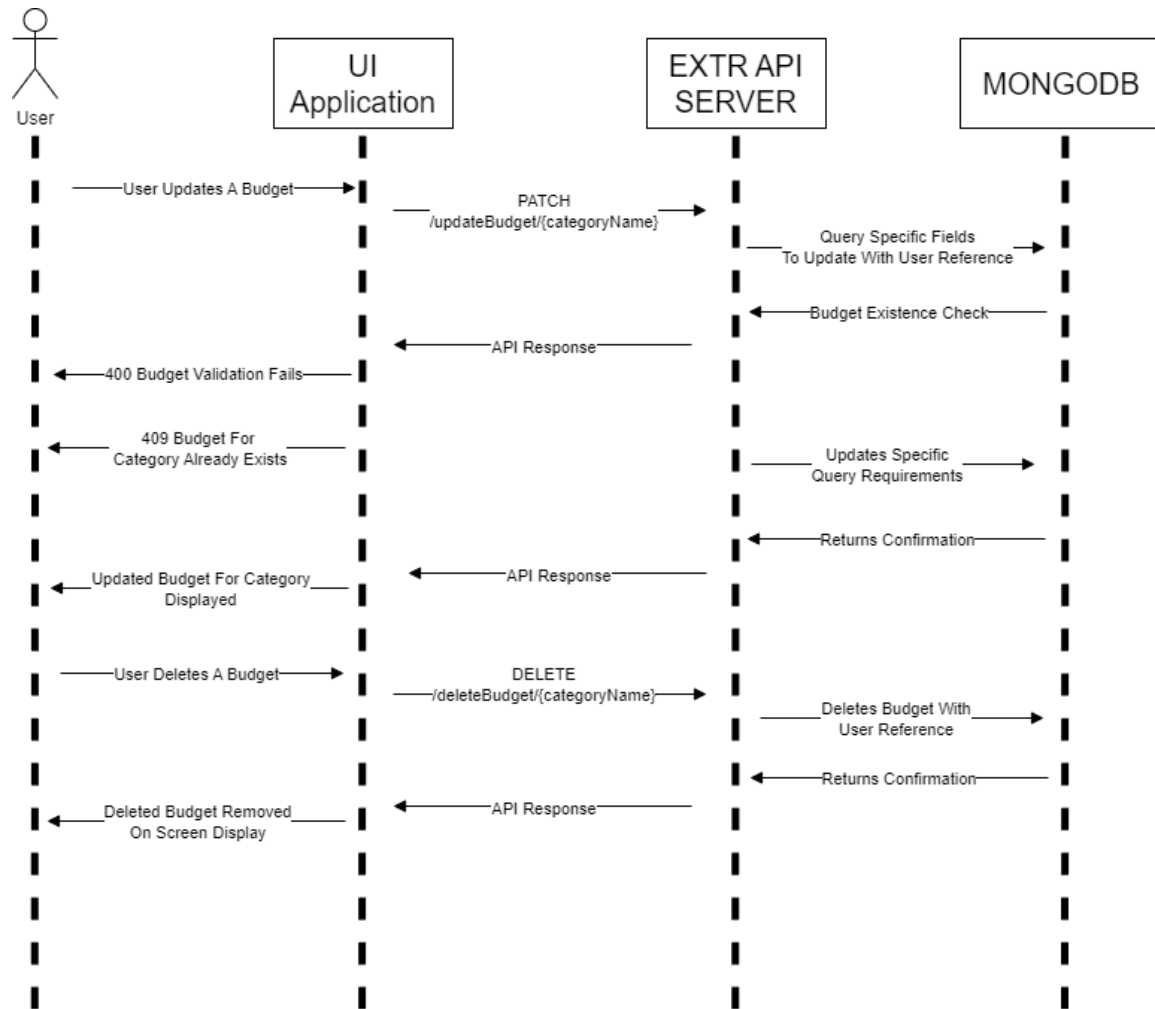
PATCH/updateExpense/{ExpenseName} and DELETE/deleteExpense/{ExpenseName}



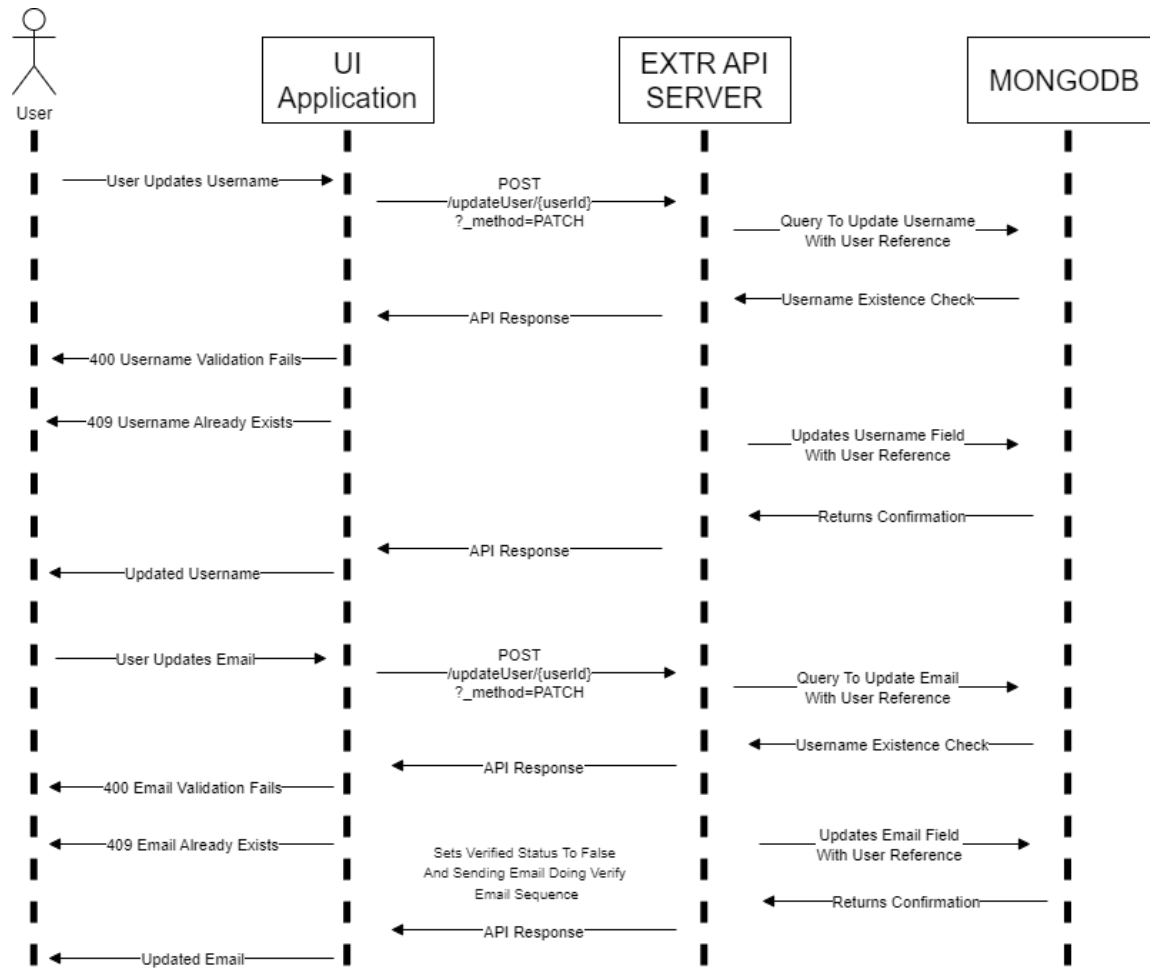
GET/userBudgets and POST/addBudget



PATCH/updateBudget/{categoryTitle} and DELETE/deleteBudget/{categoryTitle}



POST/updateUser/{userId}?_method=PATCH



POST/updateUser/{userId}?_method=PATCH

