

SEBA Master - Web Application Engineering

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Assignment 3

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Budgetly is an expense tracking web app to help private customers with many monthly transactions or critical budgets to keep track of their finances with automated bank transaction analysis, customizable budget categories, and special attention to data security.

Screenshot of Homepage

The screenshot shows the Budgetly application interface. On the left is a sidebar titled "Categories" with sections like Overview, Sport, Tennis, Jogging, Boulder, Party Life, Job, Food, and Uncategorized. Each section has edit and delete icons. A "New Category" button is at the bottom. The main area displays a table of transactions with columns: Date, Category, Account, Partner, Type, Reference, Amount, and Verified. The table shows various entries such as "Job" and "Food" transactions from different accounts and partners. At the top right is a "New Transaction" button, and below the table are "Charts" and "Table" buttons. At the bottom are pagination controls and a "Rows per page" dropdown set to 10.

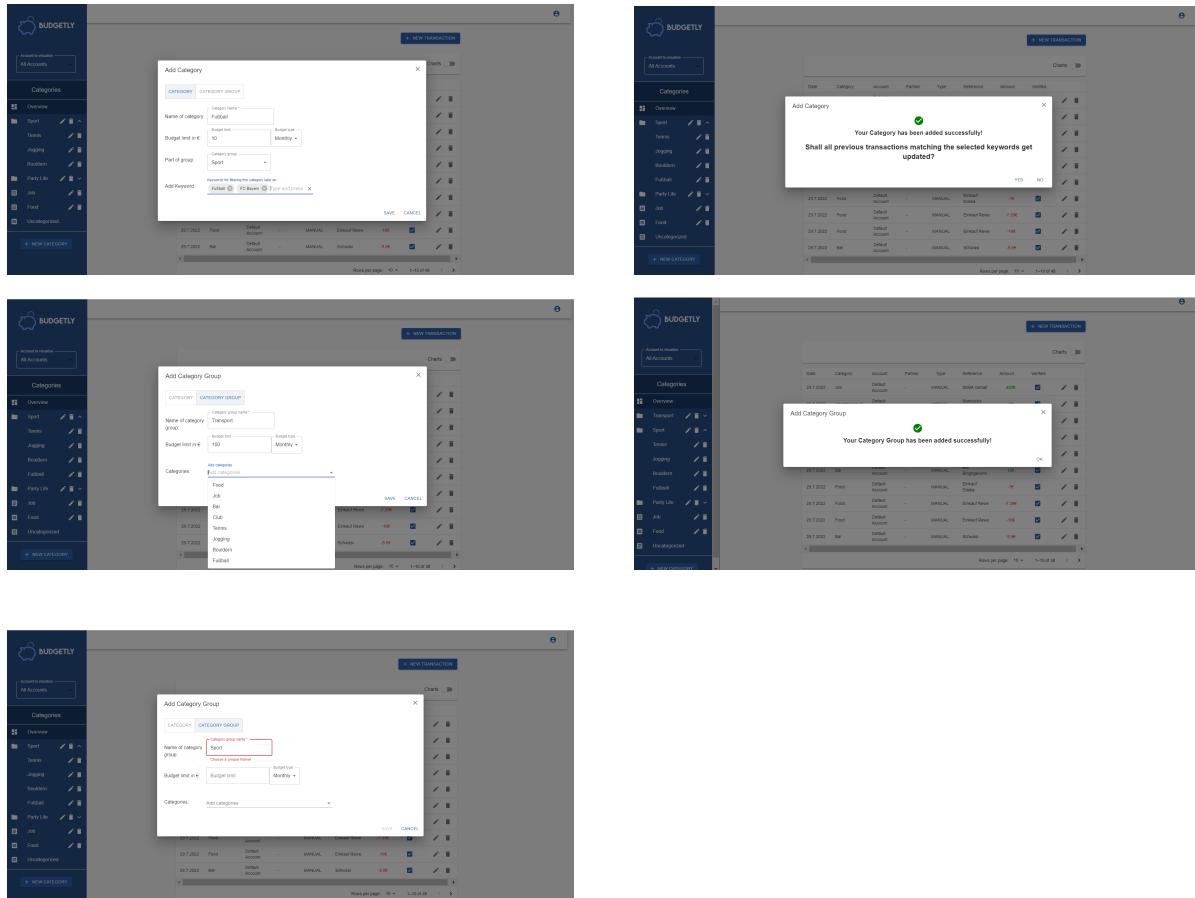
Date	Category	Account	Partner	Type	Reference	Amount	Verified	Actions	
29.7.2022	Job	Default Account	-	MANUAL	SEBA Gehalt	450€	<input checked="" type="checkbox"/>		
29.7.2022	Uncategorized	Default Account	-	MANUAL	Starbucks Coffee	-8€	<input checked="" type="checkbox"/>		
29.7.2022	Uncategorized	Default Account	-	MANUAL	Bubble Tea	-7€	<input checked="" type="checkbox"/>		
29.7.2022	Jogging	Default Account	-	MANUAL	Strava Premium	-5,99€	<input checked="" type="checkbox"/>		
29.7.2022	Club	Default Account	-	MANUAL	Neuraum	-32€	<input checked="" type="checkbox"/>		
29.7.2022	Bar	Default Account	-	MANUAL	Bar Bingogewinn	15€	<input checked="" type="checkbox"/>		
29.7.2022	Food	Default Account	-	MANUAL	Einkauf Edeka	-7€	<input checked="" type="checkbox"/>		
29.7.2022	Food	Default Account	-	MANUAL	Einkauf Rewe	-7,39€	<input checked="" type="checkbox"/>		
29.7.2022	Food	Default Account	-	MANUAL	Einkauf Rewe	-16€	<input checked="" type="checkbox"/>		
29.7.2022	Bar	Default Account	-	MANUAL	Schwasi	-9,5€	<input checked="" type="checkbox"/>		

Deviations:

- Instead of having to choose between “Table”, “Chart”, and “Insights”, users can decide to enable “Charts” and they can simultaneously see the table and charts. We removed “Insight” completely because we currently have no information that can be displayed there. Some insights are still showing via a Snackbar
- The table additionally displays the TransactionType such that users can see whether they added the transaction manually or it was automatically added. In the latter case, users are able to see if a transaction is an ingoing or outgoing transaction.

Use Cases with Screenshots

Use Case #1: Add a Category



Deviations:

- General: we moved all “Save”, “Ok”, “Cancel”, and “Add” buttons to the bottom right corner of our pop ups such that a user always knows where to expect user interaction.
- Add Category: Keywords are no longer added with a button, because we are using the available Material UI components that allow a better UI experience
- Add Category Group: adding categories works with the Material UI component Textfield with Autocomplete instead of using Select in order to allow adding of multiple categories.
- Form validation: a category's/ category group's name is not only required but needs to be unique

Use Case #2: Add a New Transaction Manually

New Transaction

Reference: Feierabendbier

Amount of money in € -4

Category of Transaction Bar

Used Account Default Account

Date	Category	Account	Partner	Type	Reference	Amount	Verified
19.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-4€	<input checked="" type="checkbox"/>
16.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-4€	<input checked="" type="checkbox"/>

Date	Category	Account	Partner	Type	Reference	Amount	Verified
29.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-4€	<input checked="" type="checkbox"/>
29.7.2022	Bar	Default Account	-	MANUAL	Bar Bingogewinn	15€	<input checked="" type="checkbox"/>
29.7.2022	Bar	Default Account	-	MANUAL	Schwasi	-9.5€	<input checked="" type="checkbox"/>
29.7.2022	Bar	Default Account	-	MANUAL	Bar Cocktailhouse	-10€	<input checked="" type="checkbox"/>
27.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-6€	<input checked="" type="checkbox"/>
23.7.2022	Bar	Default Account	-	MANUAL	Kneipentour	-18€	<input checked="" type="checkbox"/>
21.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-4€	<input checked="" type="checkbox"/>
20.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-4€	<input checked="" type="checkbox"/>
19.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-6€	<input checked="" type="checkbox"/>
16.7.2022	Bar	Default Account	-	MANUAL	Feierabendbier	-4€	<input checked="" type="checkbox"/>

You have currently spent 57.56 of 75€ for 'Bar' this month.

Deviations:

- Renaming from “Description” to “Reference” to make it consistent with the table on the homepage.
- Instead of sending an error message when a user does not enter a number for the amount, we directly only allow input that matches a regular expression for amounts of money (similar to the “Add Category/Category Group”).
- If a transaction is stored successfully, we do not display it in the pop up but send a notification via the Material UI component “Snackbar”, such that we can directly add the information that is needed for the Budget Alarm. This allows a smoother UI experience with fewer unnecessary clicks.

Use Case #3: Upgrade to a Premium Account

Deviations:

- We abstained from having banner ads because we currently have no real partners for advertisements
- The style of the pop up for upgrading to premium subscription is adapted to be consistent with other pop ups

Use Case #4: Add a New Bank Account

The collage illustrates the user flow for adding a new bank account:

- Budgetly App:** Shows a list of bank accounts and a modal for "ADD BANK ACCOUNT".
- Bank Selection:** A list of banks in Germany, filtered by "Germany". Banks listed include Allgemeine Bank, Althalden Bank, Allianz Bank, Anadebit, Allstate, Alpen Volksbank Kempten-Jenkofen, Alpin-Bruker (Oberschwabenbank), and apbank.
- Nordigen Sign-in:** A screenshot of the Nordigen sign-in page titled "Sandbox Finance". It asks for permission to access payment accounts and displays fields for "User ID" and "Code generated by PIN calculator".
- Sandbox Finance Consent:** A screenshot of the Nordigen consent page titled "Sandbox Finance". It asks for permission to access accounts, transactions, and balances, and displays a code: GL334397994972188.
- Nordigen Sign-in:** Another screenshot of the Nordigen sign-in page, identical to the one above.
- Budgetly App:** Shows the "MANAGE BANK ACCOUNTS" screen with a table of bank accounts and a "SELECT BANK" dropdown set to "Germany".

Deviations:

- The list of a user's bank accounts does not present a picture of bank cards but the logo of the bank. Furthermore all necessary information is directly shown in the list such that an additional button is not needed. Edit and Delete buttons are now consistent to the other buttons for editing and deleting by using respective icons.
- If a user chooses to add a bank account, they can select a bank from a list that is filtered by one of five European countries.
- After selecting a bank, the user is forwarded to Nordigen where they can give Budgetly access to chosen bank accounts. In order to conceal sensitive information within the project, we chose to only allow access to the "Sandbox Bank" that holds mock data. Still, the integration with real banks is fully working once the sandbox overwrite flag is removed from the code. In contrast to the mockups, the authentication process with the bank does not take place in our app but users are forwarded to Nordigen and the bank website instead and are redirected to Budgetly when the process of authentication is completed.
- Because the descriptions of Bank Accounts are sufficient to understand, we have omitted the table heads such that the view looks less crowded (i.e. if only one bank account exists for a specific bank).