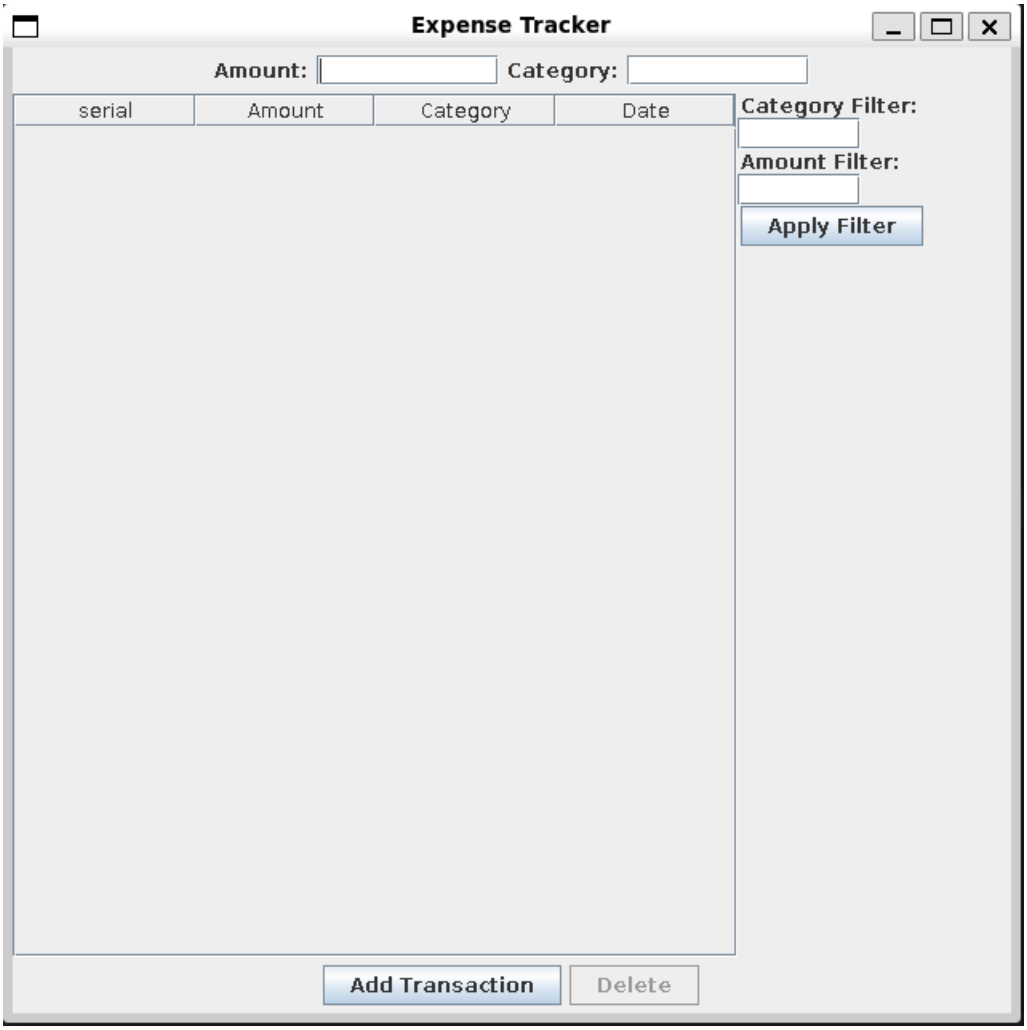
COMPSCI 520 Homework 2 Usability: Undo Functionality

View: in order to implement the undo functionality, I will create a “Delete” button that will be next to the “Add Transaction” button. I can do this by adding a JButton in the ExpenseTrackerView class, add the JButton to the same panel as the “Add Transaction” JButton, then add any accessor functions like getDeleteBtn() which will return the button object when called. The button will be disabled by default in the constructor (using the setEnabled function), and I can add an action listener inside the view constructor after the transactions table is initialized. This action listener will listen to the rows that are selected in the table (the selection model) using the getSelectionModel method from the JTable class. Then, we will enable the button if a row is selected (using the javax.swing method getSelectedRow) and it is not the “Total” row (the last row is the row that shows the sum of all the transactions and shouldn’t be deleted). Finally, in the refreshTable method in ExpenseTrackerView, we have a conditional statement that checks if the size of the transactions list is zero; if it is, then we disable the “Delete” button.

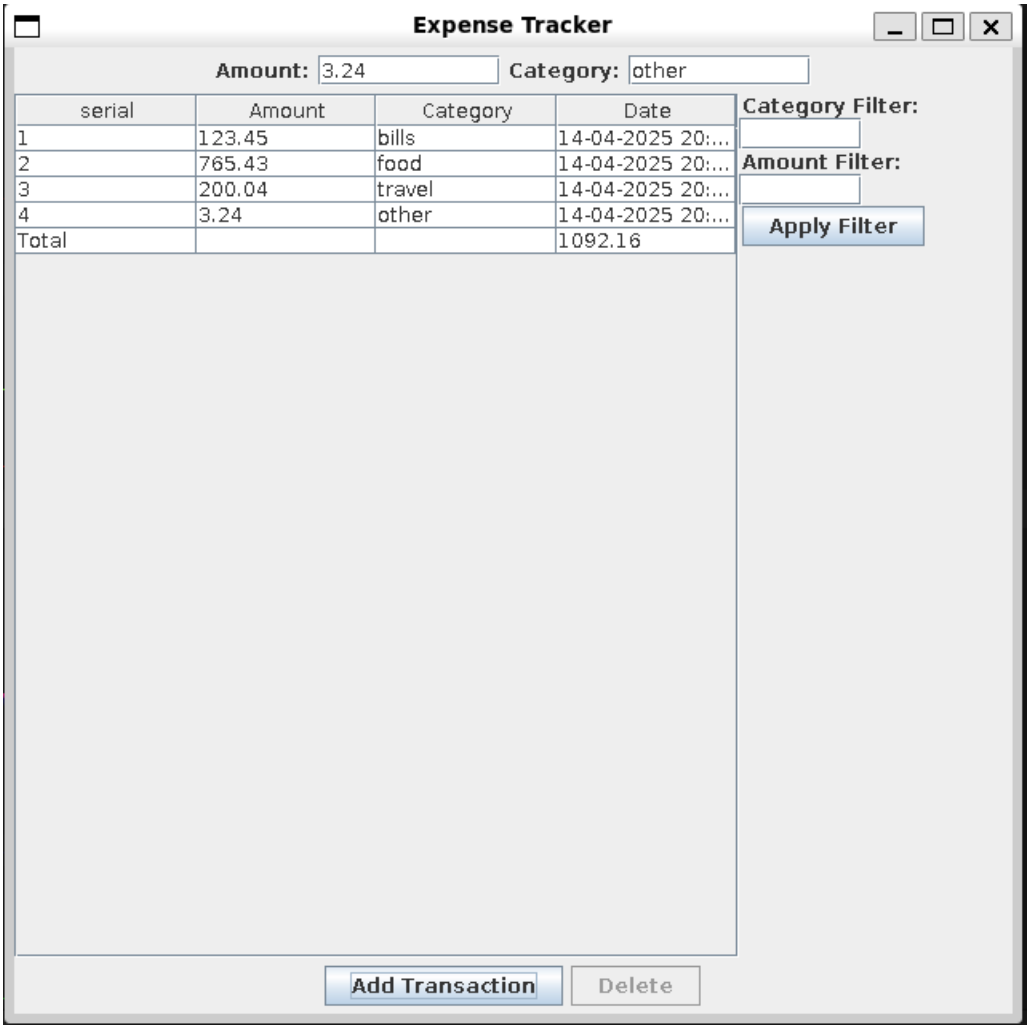
Controller: set up an action listener in ExpenseTrackerController constructor. This action listener will wait until the “Delete” button is clicked. Then, it will use the javax.swing method getSelectedRow to retrieve the Transaction object that has been selected by the user from the transactions table. Ensure that this row is not the last row (the “Total” row), and if it isn’t, then call the model to remove the transaction from the transaction list and call the refresh function to update the table in the view.

Model: the controller will need to invoke the removeTransactions function from the ExpenseTrackerModel class in order to remove the user-selected Transaction object from the transactions list.

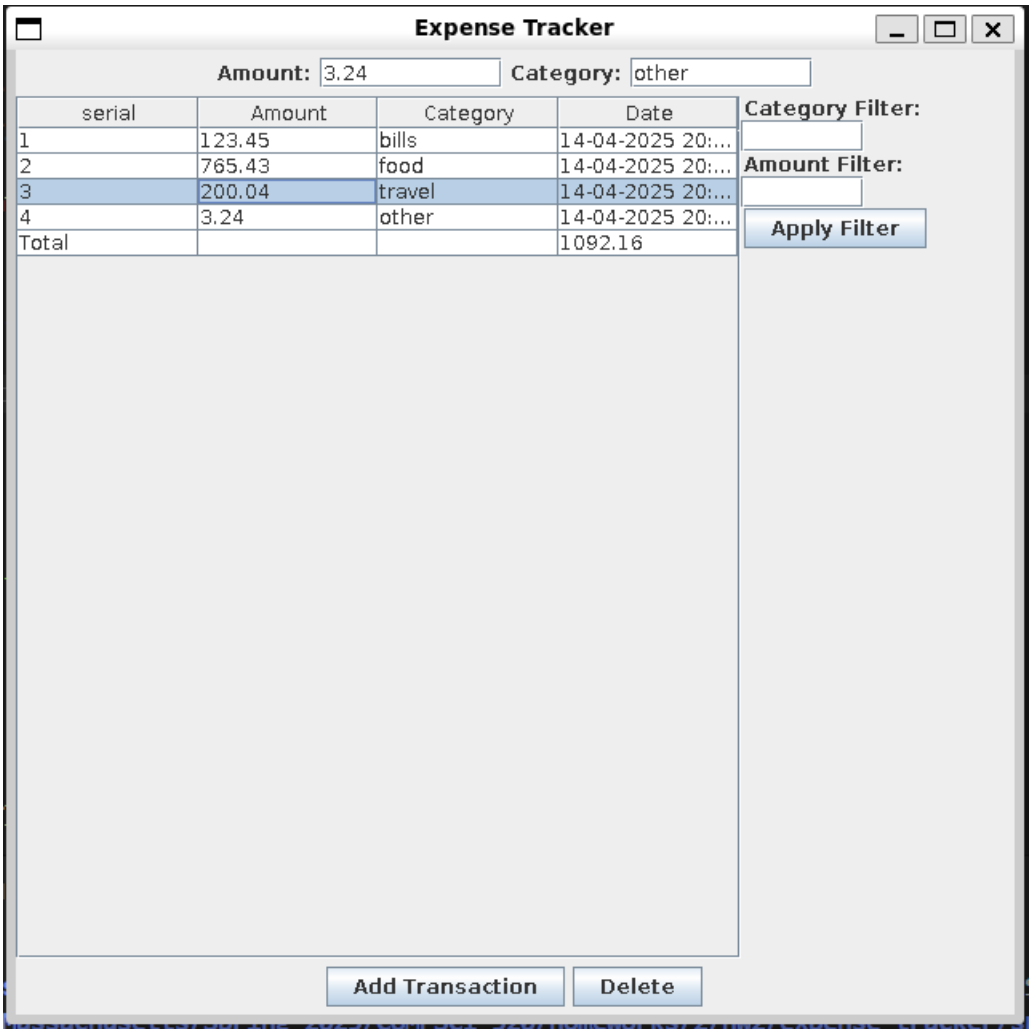
Mock-up UI screenshots:



The above figure shows the disabled “Delete” button, since there are no rows in the transactions table.



The above figure shows the disabled “Delete” button, since there are no rows selected in the transactions table.



The above figure shows the enabled “Delete” button, since there is a selected row in the transactions table.