

[Personal Finance] Functional Test Plan				
Objectives	Test Case ID	Test Case Description	Test Data	Expected Results
Initialize Chart of Accounts	1	Valid file format	{filename}.csv	Accounts from the file are loaded into the system.
	2	Invalid file format	{filename}.txt	System displays invalid file error message.
	3	Empty file	-	System displays invalid file error message.
	4	Missing value in Account_ID	Account_ID: , Name: Account1, Category: Income, Balance: 0	System displays error for missing values in a row.
	5	Missing value in Name	Account_ID: 1001, Name: , Category: Income, Balance: 0	System displays error for missing values in a row.
	6	Missing value in Category	Account_ID: 1001, Name: Account1, Category: , Balance: 0	System displays error for missing values in a row.
	7	Missing value in Balance	Account_ID: 1001, Name: Account1, Category: Income, Balance:	System displays error for missing values in a row.
	8	Wrong account ID for Income, Expense, Asset, Liability	Account_ID: 1001, Name: Account1, Category: Expense, Balance: 0	System displays error for invalid account ID for column "Expense".
	9	Alphabetic characters in account id	Account_ID: abc, Name: Account1, Category: Income, Balance: 0	System displays error for invalid account ID.
	10	Duplicate account IDs	Account_ID: 1001, Name: Account1, Category: Income, Balance: 0 Account_ID: 1001, Name: Duplicate, Category: Income, Balance: 0	System displays error for duplicate account IDs.
	11	Negative balance account	Account_ID: 1001, Name: Account1, Category: Income, Balance: -1	System displays error for negative balance.
	12	Alphabetic characters in account balance	Account_ID: 1001, Name: Account1, Category: Income, Balance: abc	System displays error for invalid account balance.
	13	Invalid Column Name	ID: 1001, Name: Account1, Type: Income, Amount: 0	System displays error for invalid column.
	14	Invalid Account Category	Account_ID: 5001, Name: Account5, Category: Testing, Balance: 0	System displays error for invalid category.
	15	Missing Column	Account_ID: 1001, Name: Account1, Category: Income	System displays error for missing columns.
	16	Extra Column	Account_ID 1001: , Name: Account1, Category: Income, Balance: 0, Extra: Extra	System displays error for extra columns.
Add Transaction	17	Add transaction with valid input	Source: "1001", Destination: "3001", Amount: 100.00, Date: "2024-10-18", Description: "Payment"	System adds the transaction and updates the balances of both accounts.
	18	Add transaction with invalid format of source and destination	Source: "2001", Destination: "1001", Amount: 100.00, Date: "2024-10-18", Description: "Payment"	System display "Please input a valid data" error message and ask again.
	19	Add transaction with same account	Source: "1001", Destination: "1001", Amount: 100.00, Date: "2024-10-18", Description: "Payment"	System displays "You can't add transaction between the same account" error message and ask again.

	20	Add transaction with negative amount	Source: "1001", Destination: "3001", Amount: -100.00, Date: "2024-10-18", Description: "Payment"	System displays "Transaction can't be negative" error message and ask again.
	21	Add transaction with invalid date	Source: "1001", Destination: "3001", Amount: 100.00, Date : "2024-13-18", Description: "Payment"	System display "Please input a valid data" error message and ask again.
	22	Add transaction with blank source account	Source: "", Destination: "3001", Amount: -100.00, Date: "2024-10-18", Description: "Payment"	System display "Please input a valid data" error message and ask again.
	23	Add transaction with blank destination account	Source: "1001", Destination: "", Amount: 100.00, Date: "2024-10-18", Description: "Payment"	System display "Please input a valid data" error message and ask again.
	24	Add transaction with non-exist Source account ID	Source ID: 1006 , Destination: 1001, Amount: 100.00, Date "2024-10-18", Description: "Payment"	System display "ID not found, Please input existing ID" error message and ask again.
	25	Add transaction with non-exist Destination account ID	Source ID: 1001, Destination: 1006, Amount: 100.00, Date "2024-10-18", Description: "Payment"	System display "ID not found, Please input existing ID" error message and ask again.
	26	user input "cancel"	input : "cancel"	exit add transaction
Delete Transaction	27	Valid transaction that can be deleted	Transaction ID: 1	System deletes the Transaction
	28	Transaction ID that does not exist that can't be deleted	Transaction ID: 15	System display "Transaction ID does not exist" error message and ask again.
	29	Transaction ID in incorrect format to be deleted	Transaction ID: abc	System display "Invalid Transaction ID" error message and ask again.
	30	Blank Transaction ID to be deleted	Transaction ID:	System display "Invalid Transaction ID" error message and ask again.
	31	user input "cancel"	input : "cancel"	exit delete transaction
Show transaction	32	Show lists of transaction for valid account	Account: Account1, Start Date Range: "2024-10-14", End Date Range: "2024-10-21"	A display of a list of all transaction, arrange by date for the account.
Search for transaction	33	user input valid choice	"1", "2", "3", or "cancel"	ask next input
	34	user input invalid choice	"5"	Display error message and ask user to reinput
	35	Search by invalid date	Date "2004-10-24"	Message "Transaction not found"
	36	Search by valid date	Date "2005-05-20"	Pop up all list of transaction that is assign to that date
	37	Search by valid id (source and destination)	Destination account: 1001	Pop up all list that have destination account of that id, arrange by date
	38	Search by invalid id (source and destination)	Destination account: 9876	Message "Transaction not found"
	39	Search by invalid format	Destination account: abc	System display "Invalid transaction format" error message.
	40	Search with blank id	Destination account:	System display "Invalid transaction format" error message.
	41	user input "cancel"	input : "cancel"	exit search transaction

Add Account	42	Verify that all input data is correct format	valid account type format, valid account name format, valid account ID format, valid amount format	Add account to the database.
(account type validation)	43	input account type is valid format	"1", "2", "3", "4"	system continue to ask next input
	44	account type is not valid format	Account type: "income"/ "5"	system gives error, and ask user to reinput account type
	45	Verify that account type is empty	Account type:	system gives error, and ask user to reinput account type
(name validation)	46	input name is valid format	Account name: KrungSri Saving Account, Account name: KrungSri Saving Account2	system continue to ask next input
	47	input name is unique	each name must be unique	system continue to ask next input
	48	input name is already exist	exist account name : KrungSri Saving Account, new account name : KrungSri Saving Account	system gives error, and ask user to reinput account name
	49	input name is empty	Account name:	system gives error, and ask user to reinput account name
(amount validation)	50	input amount is valid format (amount is number)	Amount: 3000, Amount: 200.50	Add account to the database.
	51	input amount is not number	Amount: 300a, Amount: abc	system gives error, and ask user to reinput amount
	52	input amount is negative	Amount: -3000	system gives error, and ask user to reinput amount
	53	input amount is empty	Amount:	system gives error, and ask user to reinput amount
	54	user input "cancel"	input : "cancel"	exit add account
Delete Account	55	user input the right choice	choice: 1 (Delete by name) or 2(Delete by ID)	system continue to ask next input
(ID validation)	56	user input invalid choice	choice: 3 / one / ID / name	system gives error, and ask user to reinput choice
	57	user input exist account name	exist account name : saving account, input account name : saving account	system continue to ask next input
	58	Verify that account ID is exist	Exist ID: 1001, input ID: 1001	system continue to ask next input (confirmation)
	59	Account ID is not exist or invalid format	Exist ID: 1001, input ID: 2001 or input ID: account	system gives error, and ask user to reinput account ID
	60	user input Account ID that have exist transactions or budgets	exist transaction: 3001 --> 2001, input ID: 3001	system give error
	61	user input confirmation is "Y" or "y"	confirmation input: "Y" or "y"	delete account from database
	62	user input confirmation is "N" / "n" / or other invalid format	confirmation input: "N" / "n" / or other invalid format	system cancel the account deletion
	63	user input "cancel"	input : "cancel"	exit delete account
Show Account Balance	64	Verify that user input the valid option and input existing ID	input option: "1", "2", "3", "4"	Show account balance based on user options. (1: all account, 2: selected account ID, 3: selected account name, 4: exit program)

(option validation)	65	user input invalid option	input option: "account1"/ "all"/ "5"	system gives error, and ask user to reinput option
(ID validation)	66	user choose "1" option	input option: 1	system show all account balance
	67	user choose "2" select account by ID and input exist account ID	Exist ID: 1001, input option: 2, input account ID: 1001	system show that account ID balance
	68	user choose "2" select account by ID and input non-exist account ID	Exist ID: 1001, input option: 2, input account ID: 2006	system show error and ask user to choose options
	69	user choose "3" select account by name and input exist account name	Exist name: Saving account, input option: 3, input account ID: Saving account	system show that account name balance
	70	user choose "3" select account by name and input non-exist account name	Exist name: Saving account, input option: 3, input account ID: Saving account	system show error and ask user to choose options
	71	user choose "4" option	input option: 4	exit the show account balance program and go back to user dashboard
Creating Budget	72	Valid budget	Budget Name: "Monthly Expenses", Amount: 1000.00	Budget is created and stored in the database.
	73	Budget with negative amount	Budget Name: "Monthly Expenses", Amount: -1000.00	System displays "invalid budget amount" error message.
	74	Budget with alphabet in amount	Budget Name: "Monthly Expenses", Amount: abcd	System displays "invalid budget amount" error message.
	75	Budget name that already exist	Budget Name: "Monthly Expenses", Amount: 1000.00 Budget Name: "Monthly Expenses", Amount: 1500.00	System displays "Budget name already exist!" error message.
	76	Budget with blank name	Budget Name: "", Amount: 1000.00	System displays "Invalid budget name!" error message.
Modify Budget	77	Modify existing budget	Budget Name: "Monthly Expenses", New Amount: 1500.00	Budget is modify and stored in the database.
	78	Modify non-existing budget	Budget Name: "Utilities", New Amount: 1000.00	System displays "Budget does not already exist!" error message.
	79	Modify budget balance with negative amount	Budget Name: "Monthly Expenses", Amount: -1000.00	System displays "Invalid budget amount!" error message.
	80	Modify budget balance with alphabet amount	Budget Name: "Monthly Expenses", Amount: abcd	System displays "Invalid budget amount!" error message.
	81	Modify budget balance with empty amount	Budget Name: "Monthly Expenses", Amount:	System displays "Invalid budget amount!" error message.
	82	Modify budget id to blank	New Budget ID: ""	System displays "Invalid budget id!" error message.
	83	Modify budget id to alphabets	New Budget ID: "abcd"	System displays "Invalid budget id!" error message.
	84	Modify budget id to non-existing id	New Budget ID: "2003"	System displays "Invalid budget id!" error message.
Delete Budget	85	Delete existing budget	Budget Name: "Monthly Expenses"	System delete the budget from the database.
	86	Delete non-existing budget	Budget Name: "Entertainment"	System displays "Budget category 'Utilities' doesn't exist!" error message.

	87	Confirm deletion of budget	Budget Name: "Monthly Expenses", Confirm: "y"	Confirmation message: "Budget for 'Monthly Expenses' has been deleted."
	88	Cancel deletion of budget	Budget Name: "Monthly Expenses", Confirm: "n"	System displays message: "Budget deletion cancelled."