Tran$act User Guide

Welcome to **Tran$act**, your solution for effortless transaction recording and management. Tran$act is a desktop application designed to cater to the needs of startups or small scale retailers looking for a cheap and efficient way to record daily transactions.

Here’s an overview of our main features:

- **Transaction Management** : Add, Edit and Delete Revenue and Expenses
- **Comprehensive Dashboard**: An instant snapshot of your monthly financial situation
- **Data Integration**: Export list of transactions in CSV format
- **Staff List**: Add people to your staff list and link them to transactions

In addition, Tran$act’s **Command Line Interface (CLI)** functionality will allow you to unlock greater efficiency as you type faster, while still having the benefits of a **Graphical User Interface (GUI)**.

This user guide will walk you through how to get started with our app and dive into our features to help you streamline your accounting.

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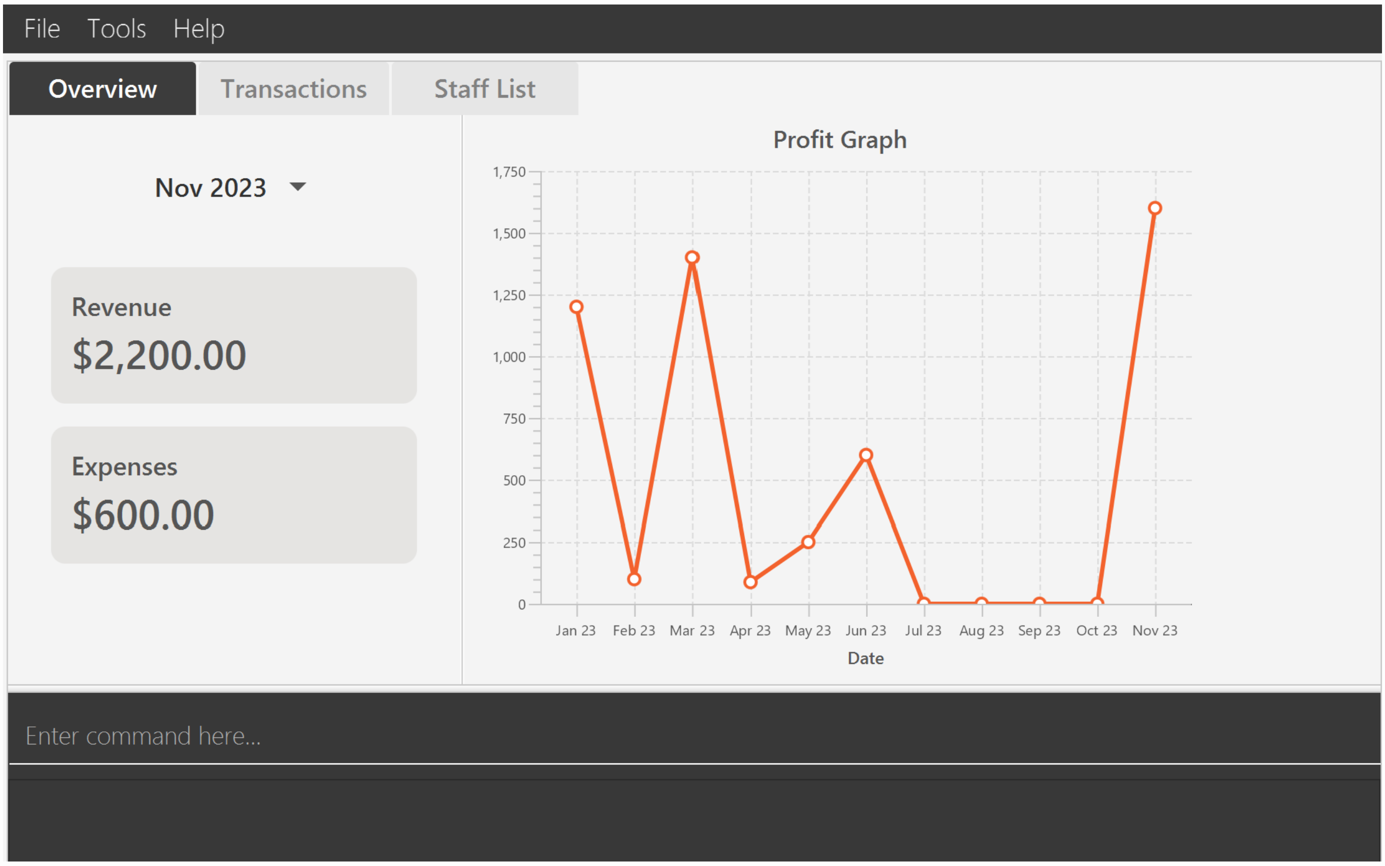
Quick start

1. Ensure you have `Java 11` or above installed in your Computer. You can find the link to downloading it here.

2. Download the latest `transact.jar` from here.

3. Copy the file to the folder you want to use as the *home folder* for Tran$act.

4. Double click `transact.jar` to start the app. The GUI below should appear in a few seconds.



> ***! If the above does not work, try this method:***
>
> *Open a command terminal, `cd` into the folder you put the jar file in, type `java -jar transact.jar` and press Enter to run the application.*
> *If you're on a Mac, then this command terminal should just be `Terminal` while if you're on windows, this command terminal should be `cmd`.*

1. The app contains some sample data. Type `view s` to switch to the *staff list*.

> *Alternatively, you can click on the Staff List/Transaction tab at the top of the window to switch to the staff/transaction view respectively.*

1. Let's add a new staff member: type `addstaff n/Isaac p/92345678 e/isaac@gmail.com a/Blk 456, Pasir Ris St 32 t/marketing` and press Enter.

   This creates a new staff member called `Isaac` with the phone number `92345678`, email `isaac@gmail.com`, address `Blk 456, Pasir Ris St 32`, and adds an optional tag with the name `marketing`.

2. Let's add a new transaction: type `add ty/E d/Flyer printing amt/100 on/23/10/23 s/7` and press Enter.

   This creates a new transaction with type `E` for expense, description `Flyer printing`, amount `100`, date `23/10/2023` and staff with ID of `7`, which in this case is `Isaac` from the previous step since that's what the app automatically assigned them.

   Notice that the app automatically switches to the *transaction list*, and your newly added transaction appears at the bottom of the list.

3. Congratulations, you have successfully added a staff member and a transaction!

4. Once you have familiarized yourself with Tran$act and want to begin inputting your own data, feel free to type `clearstaff` and press Enter followed by `cleartransaction` and press Enter to clear the transaction book and staff list.

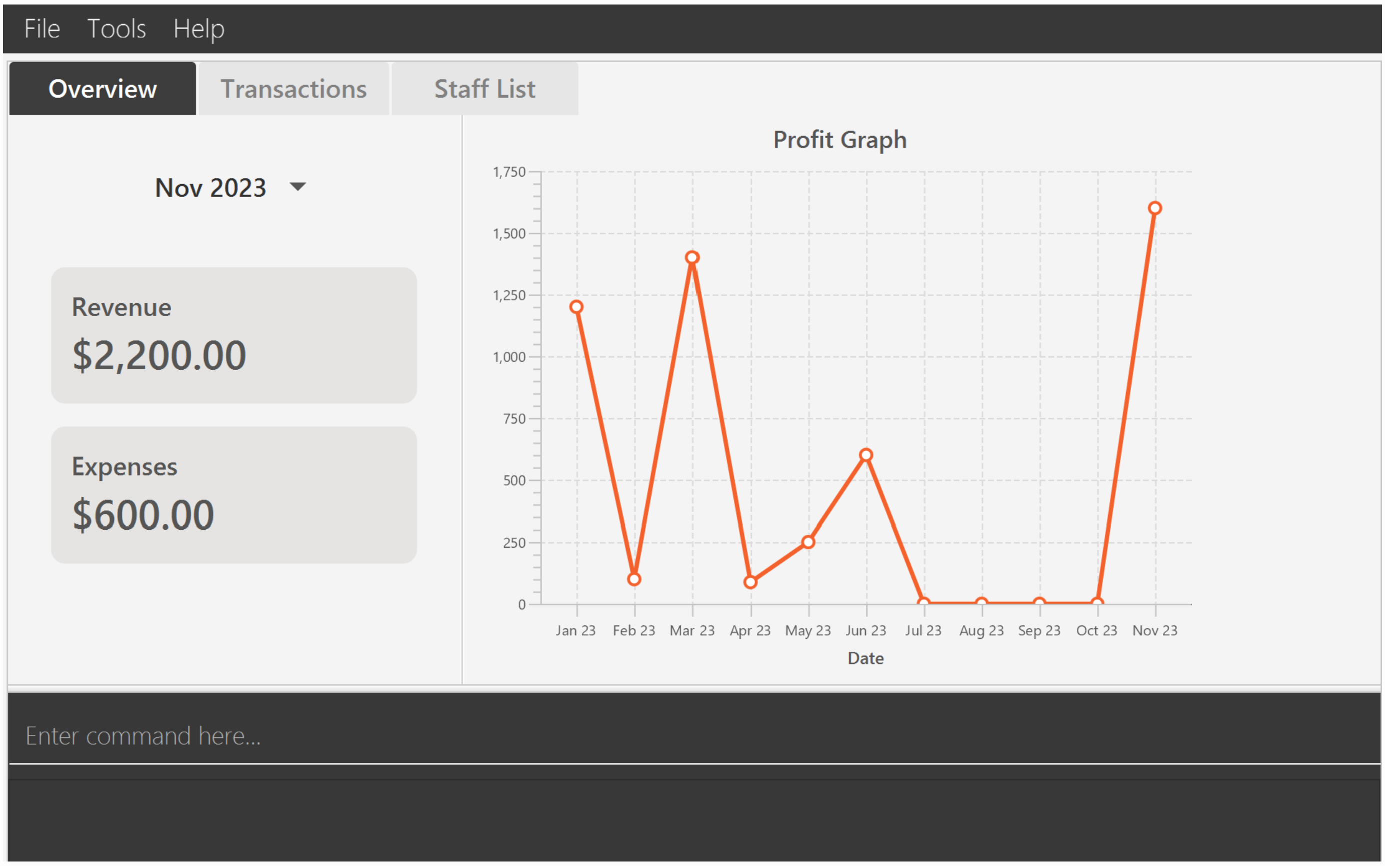
5. Now, you can begin using Tran$act for to record your own data.

6. Refer to the Usage Section below for the full details of each command. Enjoy transacting with Tran$act!

Navigating the GUI

Tran$act's GUI is simple and gives you access to all of its features with just one click.

This should be what you see when you open Tran$act for the first time:



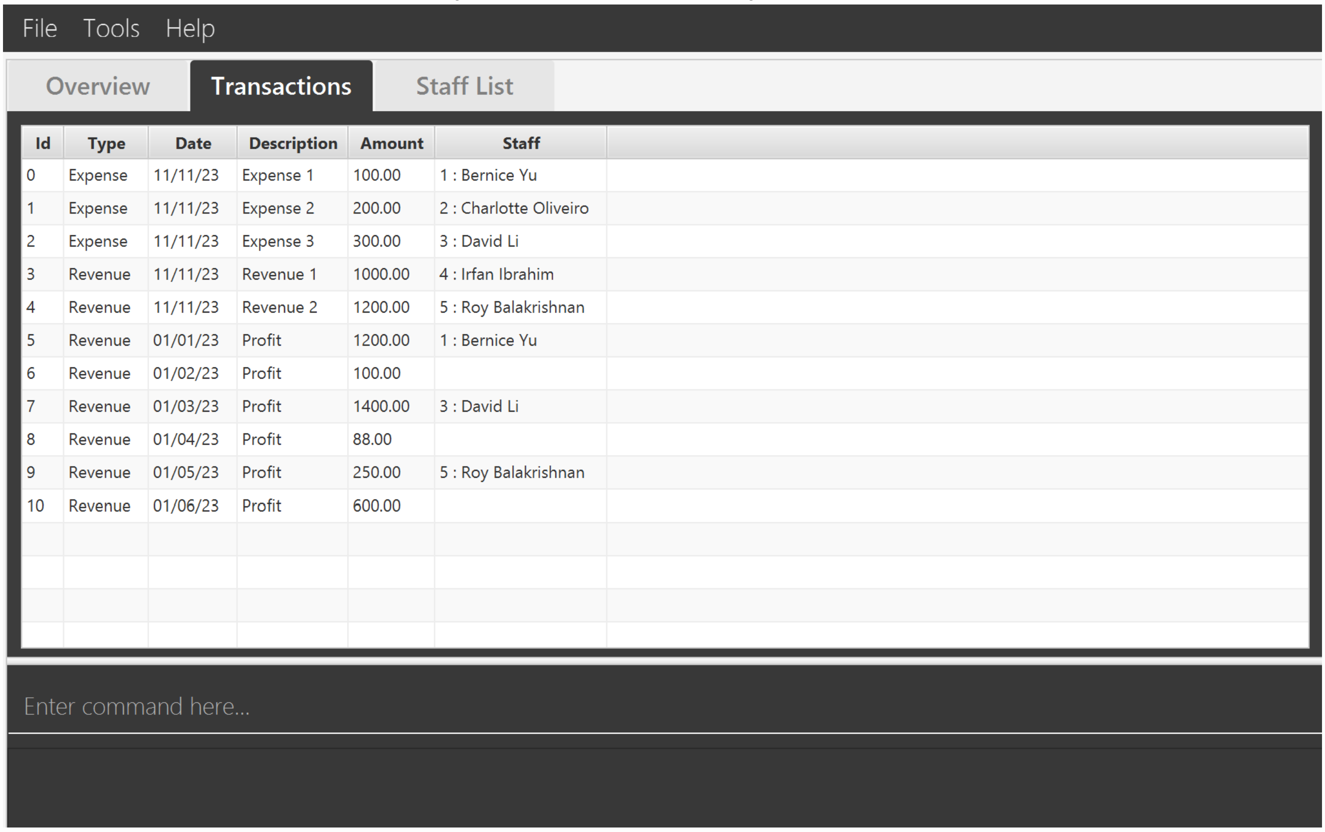
The menu bar contains three menu buttons:

1. **File** — Contains actions like exporting data and exiting the program.
    1. Export
        1. Staff List — Exports the staff list into a JSON file. Opens a window of your computer's File System. Once you have chosen the folder where you want the JSON file of your staff list to be exported to, press Enter and it will appear there as `addressBook.json`.
        2. Transaction List — Exports the transaction list into a CSV file. Opens a window of your computer's File system. Once you have chosen the folder where you want the CSV file of your transaction list to be exported to, press Enter and it will appear there as `transactions.csv`.
    2. Exit — Exits the program.
2. **Tools** — Contains actions for clearing the transaction list and staff list.
    1. Clear Staff — Clears all existing staff in the staff list. Performs the same function as the `clearstaff` command.

    2. Clear Transactions — Clears all existing transactions. Performs the same function as the `cleartransaction` command.
3. **Help** — Contains more information about Tran$act.
    1. View User Guide — Opens your browser to show the user guide. Performs the same function as the `help` command. Can also be accessed by pressing F1 on the keyboard.

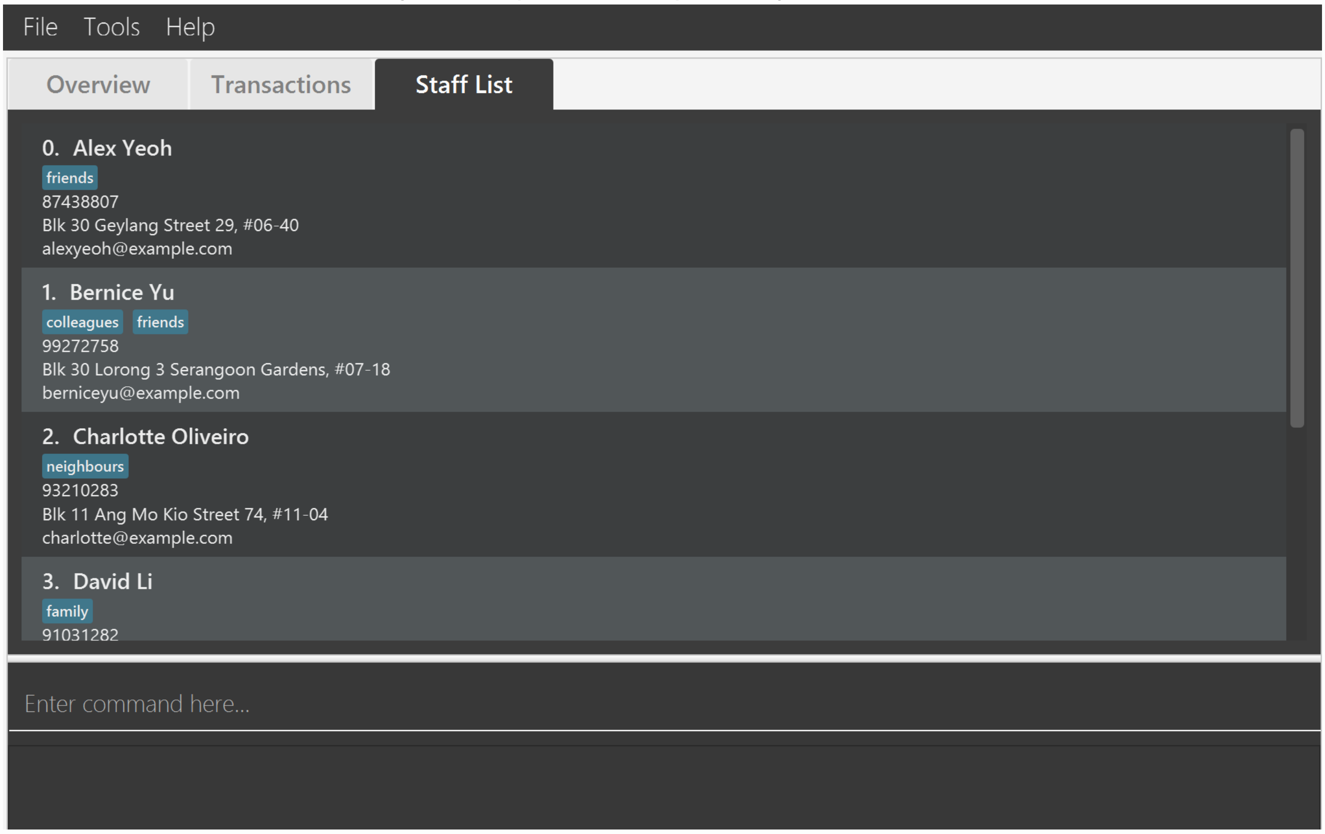
Under the menu bar contains three tabs:

1. **Overview** — This tab shows you a monthly summary of your finances based on the transactions you have entered. When you have transactions, the graph will be populated.
2. **Transactions** — This tab shows you the transactions you have entered in a table.



Id	Type	Date	Description	Amount	Staff
0	Expense	11/11/23	Expense 1	100.00	1 : Bernice Yu
1	Expense	11/11/23	Expense 2	200.00	2 : Charlotte Oliveiro
2	Expense	11/11/23	Expense 3	300.00	3 : David Li
3	Revenue	11/11/23	Revenue 1	1000.00	4 : Irfan Ibrahim
4	Revenue	11/11/23	Revenue 2	1200.00	5 : Roy Balakrishnan
5	Revenue	01/01/23	Profit	1200.00	1 : Bernice Yu
6	Revenue	01/02/23	Profit	100.00	
7	Revenue	01/03/23	Profit	1400.00	3 : David Li
8	Revenue	01/04/23	Profit	88.00	
9	Revenue	01/05/23	Profit	250.00	5 : Roy Balakrishnan
10	Revenue	01/06/23	Profit	600.00	

3. **Staff List** — This tab shows you the persons or parties you have entered in a list format.



> ***! Staff List Indexing** will not be in order after editing the list*
>
> *The indexing serves as a way to link transactions to the respective staff*

The input field with the grey text `Enter command here...` is the command box, where you can enter your commands. Below the command box is the output window. This is where Tran$act's messages will be shown to you, from success messages to command input errors. You can clear it with `clear`.

Features

Tran$act offers a range of features designed to make transaction recording and management a seamless process. These features are tailored to the needs of accountants and finance professionals in small businesses, allowing for efficient data entry and financial reporting. Here's an overview of the key features:

1. Adding Transactions

Tran$act allows you to add transactions with ease. Specify the transaction type, description, amount, date, and optionally, the associated person. The system validates your input data and records the transaction in the database.

2. Removing Transactions

Remove transactions from your records with ease. Simply specify the ID of the transaction you wish to delete, and the system will remove it from the database.

3. Viewing All Transactions

View a comprehensive list of all recorded transactions in one table. This list provides an overview of all financial activities in one place.

4. Editing Transactions

Need to make corrections or updates to transaction records? Tran$act allows you to edit transaction details, ensuring your records are accurate.

5. Filtering Transactions

Need to find transactions meeting a specific criteria? Tran$act allows you to filter transactions by date, amount and person.

6. Sorting Transactions

Tran$act provides support for sorting your transactions by either date or amount. They can be sorted in either ascending or descending order.

7. Adding Staff

Tran$act allows users to add staff to the staff list so you can link transactions to that staff. Each staff entry can store a person's name, phone number, email address and any tags they are associated with.

8. Editing Staff

Tran$act allows users to edit existing staff in the staff list in case any of their details have changed.

9. Deleting Staff

Someone left the business? Tran$act supports functionality to remove staff who may have left the company or are no longer associated with it, reducing bloat.

10. Dashboard Display

Upon opening the app, you’ll be greeted with a clear and concise dashboard. The dashboard displays essential financial information, including total monthly revenue and expenses, as well as a net profit graph for available months.

11. Exporting Transactions in Comma-Separated Values (CSV) Format

For those who need to share data with stakeholders, Tran$act allows you to export your transaction data in a CSV file.

12. Exporting Staff List in JSON Format

For those who need to view their staff list in another format, Tran$act allows you to export your staff list in a JSON file.

Usage

Parameter	Description
[ ]	Optional field
<DESCRIPTION>	Any string without `/`
<NAME>	String containing only letters and/or digits
<PHONE>	Number with at least 3 digits (trailing zeroes are allowed)
<EMAIL>	See the addstaff command for full details
<ADDRESS>	Any string without `/`
<TAG>	A single word with only alphabets and/or digits, with no spaces
<KEYWORD>	A single word with no spaces
<TYPE>	R (for Revenue), or E (for Expense) - case insensitive
<AMOUNT>	Any number
<DATE>	In dd/MM/yy format
<ID>	ID of a transaction, an integer
<STAFF ID>	ID of staff, an integer
<SORT TYPE>	asc (ascending) or desc (descending)
…	Multiple entries allowed, separated by a space

> ***!** Extraneous parameters for commands that do not take in parameters (such as view, help, list, exit, clearstaff, cleartransaction, and clear) will be ignored. For example, if the command `help 123` is entered, it will be interpreted as `help`.*

Adding transaction : `add`

Adds a new transaction.

Format: `add ty/<TYPE> d/<DESCRIPTION> a/<AMOUNT> on/<DATE> [s/<STAFF ID>]`

Success output: `New transaction added: <ID>; TransactionType: <TYPE>; Description: <DESCRIPTION>; Amount: <AMOUNT>; Date: <DATE>; [StaffId: <STAFF ID>]`

Examples:

- `add ty/R d/Sold 1 Mug amt/10 on/10/10/23 s/1`
- `add ty/E d/Paid Manufacturer amt/100 on/10/11/23`

Removing transaction: `del`

Removes the transaction with the given ID.

Format: `del <ID>`

Success output: `Deleted transaction: <ID>; TransactionType: <TYPE>; Description: <DESCRIPTION>; Amount: <AMOUNT>; Date: <DATE>; [StaffId: <STAFF ID>]`

Example: `del 1`

Edit transaction: `edit`

Edits details of the transaction with the given ID.

Format: `edit <ID> [ty/<TYPE>] [d/<DESCRIPTION>] [amt/<AMOUNT>] [on/<DATE>] [s/<STAFF_ID>]`

Success output: `Edited transaction: <ID>; TransactionType: <TYPE>; Description: <DESCRIPTION>; Amount: <AMOUNT>; Date: <DATE>; [StaffId: <STAFF ID>]`

Note: At least one field to edit must be provided in the command.

Examples:

- `edit 1 ty/R amt/5000`
- `edit 2 d/NewDescription on/03/10/23`

Sorting transactions : `sort`

Sorts transactions based on the given parameters and order.

Format: `sort [date/<SORT TYPE>] [amt/<SORT TYPE>]`

- At least one parameter must be present
- If both parameters are present, the order matters
  - Transactions will be sorted by the first parameter; if there are ties, the second parameter is used to tiebreak

Success output: `Transactions sorted by: <date/amount> <SORT TYPE>`

Examples:

- `sort date/asc`
- `sort amt/desc date/asc`

Clear sort rules : `clearsort`

Removes all sort rules.

Format: `clearsort`

Success output: `Transaction sort has been cleared`

Filtering transactions : `filter`

Filters transactions based on the given parameters.

Format: `filter [ty/<TYPE>] [has/<KEYWORDS...>] [after/<DATE>] [before/<DATE>] [more/<AMOUNT>] [less/<AMOUNT>] [by/<STAFF ID>]`

- At least one parameter must be present
- If multiple parameters are present, only transactions matching all parameters will be shown
- The order of parameters does not matter
- `ty` will match transactions of the given type
  - `R` will match revenue
  - `E` will match expense
- `has` will match descriptions containing the keyword(s)
  - The search is case-insensitive. e.g. `hans` will match `Hans`
  - The order of the keywords does not matter. e.g. `Hans Bo` will match `Bo Hans`
  - Only the description is searched.

- Only full words will be matched e.g. `Han` will not match `Hans`

- `after` will match dates *on or after* the given date
- `before` will match dates *on or before* the given date
- `more` will match amounts *greater than or equal to* the given amount
- `less` will match amounts *less than or equal to* the given amount
- `by` will match transactions with the given staff ID

Success output: `<Number of transactions> transactions listed`

Examples:

- `filter more/100 less/200`
- `filter ty/R before/10/10/23 by/1`

> ***! `filter` will not affect values displayed on the dashboard overview***
>
> *The overview page takes all transactions into account regardless of filter rules.*

Clear filter rules : `clearfilter`

Removes all filter rules.

Format: `clearfilter`

Success output: `Transaction filter has been cleared`

Change Tab: `view`

Changes current tab to the one in the parameter.

Format: `view <TAB>` where `TAB` is:

- `s` or `staff` for `Staff List` tab
- `t` or `transaction` for `Transactions` tab
- `o` or `overview` for `Overview` tab

Success output:

- `Listed all <Tab Name>` for `transaction` and `staff`
- `Showed transaction overview` for `overview`

Adding staff : `addstaff`

Adds a new staff member.

Format: `addstaff n/<NAME> p/<PHONE> e/<EMAIL> a/<ADDRESS> [t/<TAG>...]`

- `EMAIL` should be of the format `local-part@domain` where:
  - `local-part` :
    - can only contain alphanumeric characters and `+`, `_`, `.`, `-`.
    - should not start or end with any special characters.
  - `domain` is made up of domain labels separated by periods, and must:
    - end with a domain label at least 2 characters long
    - have each domain label start and end with alphanumeric characters
    - have each domain label consist of alphanumeric characters, separated only by hyphens, if any.

Success output: `New person added: <NAME>; Phone: <PHONE>; Email: <EMAIL>; Address: <ADDRESS>; [Tags: <TAG>...]`

Example: `addstaff n/John Doe p/91234567 e/johndoe@gmail.com a/Blk 123, Pasir Ris St 32 t/manager`

Removing staff: `delstaff`

Removes the staff with the given ID.

Format: `delstaff <STAFF ID>`

Success output: `Deleted person: <NAME>; Phone: <PHONE>; Email: <EMAIL>; Address: <ADDRESS>; [Tags: <TAG>...]`

Example: `delstaff 1`

Edit Staff: `editstaff`

Edits details of the staff with the given ID.

Format: `editstaff <ID> [n/<NAME>] [p/<PHONE>] [e/<EMAIL>] [a/<ADDRESS>] [t/<TAG>]...`

Success output: `Edited person: <NAME>; Phone: <PHONE>; Email: <EMAIL>; Address: <ADDRESS>; [Tags: <TAG>...]`

Note: At least one field to edit must be provided in the command. The ID must be a non-negative integer.

Examples:

- `editstaff 1 p/91234567 e/johndoe@example.com`
- `editstaff 2 n/NewName t/Manager`

Locating staff by name: `find`

Finds staff whose names contain any of the given keywords.

Format: `find KEYWORD [KEYWORDS...]`

- The search is case-insensitive. e.g. `hans` will match `Hans`
- The order of the keywords does not matter. e.g. `Hans Bo` will match `Bo Hans`
- Only the name is searched.
- Only full words will be matched e.g. `Han` will not match `Hans`
- Persons matching at least one keyword will be returned (i.e. `OR` search). e.g. `Hans Bo` will return `Hans Gruber`, `Bo Yang`

Success output: `<Number of persons> persons listed`

> *! Use `view s` to list all staff members after using `find`.*

Examples:

- `find John` returns `john` and `John Doe`
- `find alex david` returns `Alex Yeoh`, `David Li`

Clearing the output : `clear`

Clears the Result Box.

Format: `clear`

Success output: clear all the information contained in the result box at bottom.

Clearing staff: `clearstaff`

Removes all entries in the staff list.

Format: `clearstaff`

Success output: `Staff list has been cleared!`

Clearing transactions: `cleartransaction`

Removes all entries in the transaction list.

Format: `cleartransaction`

Success output: `Transaction list has been cleared`

> ❗ *When all transactions are cleared, the overview page may not reflect the correct revenue, expenses. This is a known bug and will be fixed in a future release.*

Help: `help`

Opens your browser to show the user guide.

Format: `help`

Exiting the program : `exit`

Exits the program.

Format: `exit`

Saving the data

Tran$act's data is saved in the hard disk automatically after any command that changes the data. There is no need to save manually.

FAQ

1. How do I check my Java Version?
   - Open a Terminal/ Command Prompt and type java –version. If you do not have Java installed, you can check the instructions here
2. How do I download and install Java?
   - You can visit this website and download the appropriate Java installer there. For new users, we recommend downloading the respective installer for your operating system and running that to install Java 11.
3. Can I do further analysis with the transaction data?
   - The purpose of Tran$act is to keep accounting and analysis simple to improve efficiency. Nonetheless, you can export the data as a CSV file and use the data in third party apps such as excel and do further analysis if needed.
4. How can I launch Tran$act if clicking on the JAR file does not work?
   - Open a command terminal, `cd` into the folder you put the jar file in, type `java -jar transact.jar` and press Enter to run the application.
   - If this doesn't work, check our GitHub to make sure you have the latest version of Tran$act downloaded.
5. Can I import my own data into Tran$act?
   - Tran$act currently does not support file importing. However, if you have data in Tran$act on another computer, you can manually copy the `\data` folder to this computer and place it in the same folder as Tran$act and your data will be transferred over.
6. The Tran$act window is too small. Can I change its size?
   - Yes, you can change Tran$act's window size by hovering your cursor over the border's of Tran$act's window. You'll see your cursor change and you'll be able to click and drag the border freely.

Command summary

Action	Format, Examples
Add transaction	add ty/<TYPE> d/<DESCRIPTION> a/<AMOUNT> on/<DATE> [s/<STAFF ID>]
Remove transaction	del <ID>
Edit transaction	edit <ID> [ty/<TYPE>] [d/<DESCRIPTION>] [amt/<AMOUNT>] [on/<DATE>] [s/<STAFF_ID>]
Sort transactions	sort [date/<SORT TYPE>] [amount/<SORT TYPE>]
Clear sort rules	clearsort
Filter transactions	filter [ty/<TYPE>] [has/<KEYWORDS...>] [after/<DATE>] [before/<DATE>] [more/<AMOUNT>] [less/<AMOUNT>] [by/<STAFF ID>]
Clear filter rules	clearfilter
View Tab	view <TAB>
Add staff	addstaff n/<NAME> p/<PHONE> e/<EMAIL> a/<ADDRESS> [t/<TAG>...]
Remove staff	delstaff <STAFF ID>
Edit staff	editstaff <ID> [n/<NAME>] [p/<PHONE>] [e/<EMAIL>] [a/<ADDRESS>] [t/<TAG>]...
Find staff	find <KEYWORD> [KEYWORDS...]
Clear staff	clearstaff
Clear transaction	cleartransaction

Action	Format, Examples
Clear output	`clear`
Exit	`exit`

Glossary

Term	Definition
Command	An input into the text box to carry out actions
Command-Line Interface	A means of interacting with a computer program by inputting lines of text called commands.
CSV File	A Comma Separated Values (CSV) file is a plain text file that stores data by delimiting data entries with commas. Can be imported into applications like Excel.
Dashboard	A way of displaying various types of visual data in one place. In Tran$act’s case, this data includes monthly revenue, expenses and profits.
Desktop Application	An application that runs stand-alone in a desktop or laptop computer.
Graphical User Interface	A means of interacting with a computer program through the use of graphical icons.
Java 11	The 11th version of the programming language **Java** that Tran$act uses and is built on.
JSON File	A JavaScript Object Notation (JSON) file that stores data in human-readable text.
Operating System	System software that manages computer software and hardware resources. The most common ones are: Windows, MacOS and Linux.

Future work

- Exported files that are created (e.g. transactions.csv) will be able to be renamed before being exported to the selected directory.
- Functionality to import data from CSV and JSON files.