

# WalletCLi - User Guide

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# 1. Introduction

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Welcome to **WalletCLi**!

**WalletCLi** is a text-based (Command Line Interface) expenses/loan application that caters to NUS students and staffs who prefer to use a desktop application for managing their expenses and loans.

**WalletCLi** allows its users to record their daily expenses and loans. It enables easy creation, editing and deletion. Users can also pre-set their budget, and **WalletCLi** will automatically track your current expenses to ensure that its users' expenses stay within their stated budget. Expenses and loans can be efficiently managed via our intuitive category system.

**WalletCLi** is optimized for those who prefer to work with a Command Line Interface (CLi) and/or are learning to work more efficiently with CLi tools. Additionally, unlike traditional expenses/wallet applications, **WalletCLi** utilizes minimal resources on the user's machine while still allowing users to manage their expenses and keep track of their loans swiftly and efficiently.






## 2. About this User Guide

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This user guide provides a quick start guide for you to easily setup install **WalletCLi**, documentation of all various features **WalletCLi** offers, frequently asked questions and a summary of the available commands. To navigate between the different sections, you could use the table of contents above.

For ease of communication, this document will refer to expenses/loans/contacts that you might add to the application as *data*.

Additionally, throughout this user guide, there will be various icons used as described below.

	This is a tip. Follow these suggested tips to make your life much simpler when using <b>WalletCLi</b> !
	This is a note. These are things for you to take note of when using <b>WalletCLi</b> .
	This is a sign-post dictating important information. These are information that you will surely need to know to use <b>WalletCLi</b> efficiently.
	This is a sign-post informing caution. Please take note of these items and exercise some care.
	This is a rule. Ensure that you follow these rules to ensure proper usage of <b>WalletCLi</b> .

## 3. Features

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This section displays the features that you can expect from **WalletCLi**.

### Expenses System

- Add records of your expenses.
  - You may include records of your past expenses or any impending expenses.
- Manage these records by editing or deleting them.
- Tag and view your expenses with predefined categories
- You can change the currency of your expenses.
- Analyse your expenditures with our statistics feature.
- Include recurring expenses. Recurrence rate can be either daily, weekly or monthly.
  - **WalletCLi** will automatically duplicate and fill up the records up to the end of the current month.

### Loan System

- **WalletCLi** allows you to add loans that is referenced to a contact.
- After you have settled the loans, you can mark it as settled.
- If there are any changes to your loans, you can also edit your loans via the loan ID.
- **WalletCLi** also allows you to delete loans whether it is settled or unsettled.

### Contact System

- **WalletCLi** allows you to manage a contact list so that you can tag your loans to a contact.

### Notification and Reminder System

- **WalletCLi** will show you a list of unsettled loans after it starts up and will start an auto-reminder every 30 minutes by default.
- You can set the timings for the auto-reminder. Likewise, you can turn the reminders off or on when you need to.
- **WalletCLi** will also keep track of your budget and expenses, notifying you when your expenses are close to the budget you set. Likewise, when you exceed your budget, **WalletCLi** is capable to notify you as well.

### Export and Import System

- **WalletCLi** allows you export your expense or loan records in CSV files.
- **WalletCLi** allows you to import your expense or loan records from CSV files.

### Command History Utility

- **WalletCLi** keeps track of the commands you keyed into the application and allows you to undo or redo the commands that you input.

## 4. Quick Start

---

This section guides you through the installation of **WalletCLI** and provides a few sample commands you may try.

1. Ensure you have Java version 11 or later installed in your Computer.
2. Download the latest jar file from this [link](#).
3. Copy the file to the folder you want to use as the home folder for the application.
4. Open command prompt (cmd) in the folder chosen above.
5. Start the app by running the jar file with the following command:  
`run java -jar {jar file name}`
6. You should see the GUI appear in a few seconds.

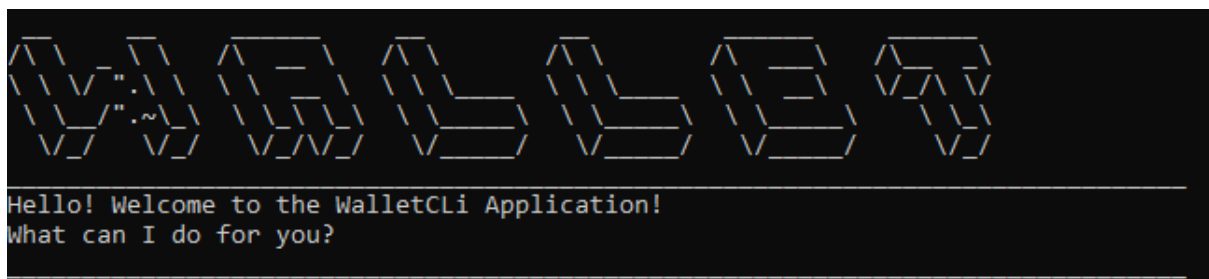


Figure 1: GUI screen upon starting **WalletCLI**

7. Type the command in the command box and press **Enter** to execute it.  
For example, typing **help** pressing **Enter** will open the help window.
8. Here are some other commands you can try:
  - **budget \$1000 01/2019:** **WalletCLI** takes note of this budget and reminds you when you are close to or have exceeded the budget for January 2019.
  - **List expense:** List all expenses in **WalletCLI**
  - **List expense /sortby date:** List all expenses in order of date specified in the expenses
  - **Bye:** Exits the application
9. Refer to Section 4, Features for details of each command.

## 5. Commands

This section explains the commands that you can use to interact with the different features and systems of **WalletCLi**.

### Command Format






- Words in UPPER\_CASE are the parameters to be supplied by you. For example, in /r DAILY, DAILY is a parameter which can be used as the recurrence rate.
- Items in square brackets are optional. For example, in add expense <DESCRIPTION> <AMOUNT> <CATEGORY> [/on <DATE>] [/r <RECURRENCE RATE>], /on <DATE>, /r <RECURRENCE RATE> is a parameter that may be omitted.

### Identifiers and Parameters

Identifiers in **WalletCLi** are designed to be short and easy to memorise. Once you are familiarised with them, you will be intuitive to use the parameters. The table of Identifiers and Parameters and their descriptions below is useful for your reference as you jump right into grasping the system.

Identifier	Parameter	Description	Format	Example
/sortby	LEND	Sorts loans based on user lending money	Text	/sortby lend
	BORROW	Sorts loans based on user borrowing money	Text	/sortby borrow
	DATE	Sorts expenses or loans by date specified in expenses or loans	Text	/sortby date
	CATEGORY	Sorts expense or loans by their specified category	Text	/sortby category
	NAME	Sorts contacts into alphabetical order (a to z)	Text	/sortby name
/on	DATE	Date of expense	Text	/on 20/01/2019
/r	RECURRING	Frequency of expenses	Text	/r daily
/d	DESCRIPTION	Description of an Expense/Loan	Text	/d interest rate 10%
	DETAILS	Details of contact	Text	/d friend
/p	PHONE NUMBER	New contact phone number	Text	/p 91234567

/a	AMOUNT	New expense/loan amount (Edit feature)	Number	/a 1000
/n	NAME	New name of Contact (Edit feature)	Text	/n David

	While the table shows you all the identifiers and parameters that <b>WalletCLI</b> uses, some commands do not make use of identifiers nor parameters. The view command is one such exception that makes use of keywords that must be typed in a specific order.
	Note that all Date inputs in <b>WalletCLI</b> are required to be in “dd/MM/yyyy” or “MM/yyyy” format. E.g. 01/02/2019 for 01 February 2019.
	All commands with parameters are required to be in the correct order.
	Note that commands are not case-sensitive but identifiers are case-sensitive.
	Note that inputs should not contain ‘,’ commas.

## 5.1 Viewing help: *help*

There are different help sections included in **WalletCLI** that can help you to understand the different command syntaxes. Each command is in a section based on the program feature that they are related to.

Format for listing available sections: `help`

```
help
The following help sections are available:
1.General
2.Expense
3.Loans
4.Contacts
5.Command History

Note the following when reading help sections:
<> indicates required parameters for command
[] indicates optional parameters for command

Read a section by typing in: help <section number>
```

Figure 5.1.1: Help section

Format for reading a section: `help <SECTION INDEX>`

Example:

- `help 5`  
Shows a list of commands related to Command History.

```
help 5

--Undo Previous Command--
command      undo
desc         undo previous command executed

--Redo Previous Command--
command      redo
desc         redo previous command executed

--Command History--
command      history
desc         view command history
```

Figure 5.1.2: Reading a section



As seen in Figure 5.1.1, `<SECTION INDEX>` is the number beside the section name. For example, the number 2 will be the `<SECTION INDEX>` for commands related to expenses.

## 5.2 Listing data: *list*

You can list and view your current Contacts, Loans and Expenses in **WalletCLI** depending on your command.

Format for listing data by specific date: `list <DATE>`

Examples:

- `list 02/03/2019`  
Shows a list of every expenses and loans by the specified date in each data added



```
list 02/03/2019
```

Here are the expenses in your list:

ID	Description	Category	Date	Amount	Recurring
1	dinner	FOOD	2019-03-02	\$40.00	No

Total amount spent: \$40.00

Here are the loans in your list:

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
1	No	lunch	\$100.00	2019-03-02	Borrow from	Mary	12345678

Figure 5.2.1: Listing loans and expenses related to date 2nd March 2019.

Format for listing all data: `list all [/sortby <PARAMETER>]`

Examples:

- `list all /sortby date`  
Shows a list of every expenses and loans sorted by the dates specified in each data added

```
list all
```

Here are the loans in your list:

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
1	No	lunch	\$100.00	2019-01-01	Borrow from	Mary	12345678
2	No	oh no	\$40.00	2018-12-03	Borrow from	Mary	12345678

Here are the contacts in your list:

ID	Name	Phone	Detail
1	Mary	12345678	friend

Here are the expenses in your list:

ID	Description	Category	Date	Amount	Recurring
1	dinner	FOOD	2019-01-01	\$40.00	No
2	phone bills	BILLS	2019-01-01	\$80.00	No
3	train ticket	TRANSPORT	2019-01-04	\$10.00	No
4	groceries	SHOPPING	2019-05-04	\$10.00	No
5	sweets	FOOD	2019-10-02	\$10.00	No

Total amount spent: \$150.00

```
list all /sortby date
```

Here are the loans in your list:

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	No	oh no	\$40.00	2018-12-03	Borrow from	Mary	12345678
1	No	lunch	\$100.00	2019-01-01	Borrow from	Mary	12345678

Here are the contacts in your list:

ID	Name	Phone	Detail
1	Mary	12345678	friend

Here are the expenses in your list:

ID	Description	Category	Date	Amount	Recurring
1	dinner	FOOD	2019-01-01	\$40.00	No
2	phone bills	BILLS	2019-01-01	\$80.00	No
3	train ticket	TRANSPORT	2019-01-04	\$10.00	No
4	groceries	SHOPPING	2019-05-04	\$10.00	No
5	sweets	FOOD	2019-10-02	\$10.00	No

Total amount spent: \$150.00

Figure 5.2.2: Listing all data before and after sorting them by date.



Notice that both expenses and loans are sorted by date? That is because expense and loans are able to accept the `/sortby date` parameter by their own too.

Format for listing Loans: `list loan [/sortby <PARAMETER>]`

Examples:

- `list loan`  
Shows a list of loans input in **WalletCLi** sorted by lending loans (As a user you specified that you lent money)

```
list loan
Here are the loans in your list:
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
1	Yes	dinner	\$100.00	2019-09-21	Borrow from	Mary	81234567

Figure 5.2.3: Listing loans

Format for listing Recurring Expenses: `list recurring [/sortby <PARAMETER>]`

Examples:

- `list recurring /sortby date`

```
list recurring
Here are the recurring expenses in your list:
```

ID	Description	Category	Date	Amount	Recurring
14	phone bills	BILLS	2019-11-01	\$80.00	MONTHLY
25	train ticket	TRANSPORT	2019-11-04	\$10.00	MONTHLY
32	groceries	SHOPPING	2019-11-04	\$10.00	MONTHLY
34	sweets	FOOD	2019-11-02	\$10.00	MONTHLY

Total amount spent: \$110.00

```
list recurring /sortby date
Here are the expenses in your list:
```

ID	Description	Category	Date	Amount	Recurring
14	phone bills	BILLS	2019-11-01	\$80.00	MONTHLY
34	sweets	FOOD	2019-11-02	\$10.00	MONTHLY
25	train ticket	TRANSPORT	2019-11-04	\$10.00	MONTHLY
32	groceries	SHOPPING	2019-11-04	\$10.00	MONTHLY

Total amount spent: \$110.00

Figure 5.2.4: Listing recurring loans before and after calling sorting

Format for listing Expenses: `list expense [/sortby <PARAMETER>]`

Examples:

- `list expense /sortby category`  
Shows a list of expenses in **WalletCLi** sorted to each of their specific categories.

```
list expense
Here are the expenses in your list:
```

ID	Description	Category	Date	Amount	Recurring
1	dinner	FOOD	2019-01-01	\$40.00	No
2	phone bills	BILLS	2019-01-01	\$80.00	No
3	train ticket	TRANSPORT	2019-01-04	\$10.00	No
4	groceries	SHOPPING	2019-05-04	\$10.00	No
5	sweets	FOOD	2019-10-02	\$10.00	No

```
Total amount spent: $150.00
list expense /sortby Category
Here are the expenses in your list:
```

ID	Description	Category	Date	Amount	Recurring
2	phone bills	BILLS	2019-01-01	\$80.00	No
1	dinner	FOOD	2019-01-01	\$40.00	No
5	sweets	FOOD	2019-10-02	\$10.00	No
4	groceries	SHOPPING	2019-05-04	\$10.00	No
3	train ticket	TRANSPORT	2019-01-04	\$10.00	No

```
Total amount spent: $150.00
```

Figure 5.2.5: List of expenses from default to category sorting



We only have a total of 5 categories available for use, and they are **food, bills, transport, shopping** and **others**.

Format for listing Contacts: `list contact [</sortby <NAME>>]`

Examples:

- `list contact /sortby name`  
Shows a list of contacts in **WalletCLi** sorted by alphabetical order

```
list contact /sortby name
Here are the contacts in your list:
```

ID	Name	Phone	Detail
2	Ben		brother
3	Jane	90181829	
1	Lauren		
4	Ryan Tang	(+65)81731829	

Figure 5.2.6: Listing contacts



The default results of **list** command are sorted by the date you added the data into **WalletCLi**.

## 5.3 Adding Data: *add*

You can either add Contacts, Loans or Expenses to **WalletCLi** depending on your command.

Format for adding Contacts: `add contact <NAME> [/d <DETAILS>] [/p <PHONE NUMBER>]`





Examples:

- `add contact mary /p 8728 1831 /d sister`  
Adds a single contact that consists of the name Mary, a description of Mary being your sister and her phone number, i.e. number 8728 1831.

```
add contact mary /p 8728 1831 /d sister
Got it. I've added this contact.
```

ID	Name	Phone	Detail
9	mary	8728 1831	sister

Figure 5.3.1: Adding contacts

	<b>WalletCLI</b> does not check if the phone number input is just only digits, thus allowing you to input phone number in your preferred format e.g. (+65)8543 2124, 98765432, 6543-2315
	The optional parameters (/p and /d) do not need to be keyed in a specific order. E.g. add contact Mary /d sister /p 8728 1831 will produce the same output as shown in the Figure 5.3.1.
	If you keyed in /p and /d without any arguments, <b>WalletCLI</b> will leave the phone and details as empty.
	<b>WalletCLI</b> currently allow duplicate contacts.

Format for adding Loans: add loan <DESCRIPTION> <AMOUNT> <DATE> </l or /b> </c CONTACT ID>


Examples:

- add loan lunch \$100 21/09/2019 /b /c 2  
Adds a single loan; you borrowed 100 dollars for lunch on the 21st September 2019. And by default, it will be indicated that the loan has not been settled.

```
add loan lunch $100 21/09/2019 /b /c 2
Got it. I've added this loan:
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	No	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278

Figure 5.3.2: Adding loans

	Note that description should not contain the '\$' symbol.
---	---

Format for adding Expenses: add expense <DESCRIPTION> \$<AMOUNT> <CATEGORY> [/on <DATE>] [/r <RECURRENCE RATE>]

Examples:

- add expense textbooks \$500 shopping  
Adds a single expense of textbooks worth 500 dollars today and place them under the shopping category as a one-time expense.

```
add expense textbooks $500 shopping
Got it. I've added this expense:
```

ID	Description	Category	Date	Amount	Recurring
6	textbooks	SHOPPING	2019-11-02	\$500.00	No






Figure 5.3.3: Adding a non-recurring expense

- add expense Phone Bill \$30 Bills /on 10/10/2019 /r monthly  
Adds a single monthly recurring expense of bills worth 10 dollars starting from the 1st of February 2019 until the end of the user's current month.

```
add expense Phone Bill $30 Bills /on 10/10/2019 /r monthly
Got it. I've added this expense:
```

ID	Description	Category	Date	Amount	Recurring
4	Phone Bill	BILLS	2019-10-10	\$30.00	MONTHLY

Figure 5.3.3: Adding a recurring expense

	Omitting the date sets the default expense as today (The day you key in your expenses)
	<b>WalletCLI</b> does not dictate your expenses, thus allowing the same descriptions to exist in the user's expenses and loans.
	The category parameter only accepts Bills, Food, Transport, Shopping and Others as valid inputs.
	The recurrence rate parameter only accepts Daily, Weekly or Monthly as valid inputs.
	Note that description should not contain the '\$' symbol.

## 5.4 Editing Data: *edit*

You can either edit your Contacts, Loans or Expenses to **WalletCLI** depending on your command.






Format for editing Contacts: `edit contact <CONTACT ID> [/n <NEW NAME>] [/d NEW <DETAILS>] [/p <NEW PHONE NUMBER>]`

Examples:

- `edit contact 5 /n john /p 81727183 /d brother 123@abc.com`  
Edits a single contact by changing the name to John, updating his phone number, i.e. number 81727183 and changing the details to John's email as well as indicating him as brother.

```
edit contact 5 /n john /p 81727183 /d brother 123@abc.com
Successfully edited this contact:
-----
| ID | Name      | Phone      | Detail                |
|----|-----|-----|-----|
| 5  | john     | 81727183  | brother 123@abc.com  |
|----|-----|-----|-----|
```

Figure 5.4.1: Edit contact

	<b>WalletCLI</b> does not check if the phone number input is just only digits, thus allowing you to input phone number in your preferred format e.g. (+65)8543 2124, 98765432, 6543-2315
	The optional parameters (/n, /p and /d) do not need to be keyed in any particular order. E.g. <code>edit contact 5 /d brother 123@abc.com /p 81727183 /n John</code> will produce the same output as shown in the figure above.
	If you keyed in /p and /d without any arguments, <b>WalletCLI</b> will remove the phone and details respectively from the contact. E.g. <code>edit contact 5 /p</code>
	As name is a compulsory field in contact, if you keyed in /n without any arguments, <b>WalletCLI</b> will retain the current name in the contact. E.g. editing the contact in Figure 5.3.1 with <code>edit contact 9 /n</code> will not change the name to an empty value but the contact name, mary, will be retained.
	<b>WalletCLI</b> currently allow duplicate contacts.

Format for editing Loans: `edit loan <LOAN ID> [/d <NEW DESCRIPTION>] [/a <NEW AMOUNT>] [/t <NEW DATE>] [</l or /b>] [/c <CONTACT ID>]`

Examples:

- `edit loan 1 /d dinner /a 10.50 /t 10/10/2019 /c 1`  
Edits a single loan by changing the description to “dinner”, changing the amount to \$10.50, changing the date to 2019-10-10 and change the contact with an ID of 1, who in this case is Mary.

```
edit loan 1 /d dinner /a 10.50 /t 10/10/2019 /c 1
Edit: Contact found! [ID: 1]Mary 1234@gmail.com 81234567
Successfully edited this loan:
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
1	Yes	dinner	\$10.50	2019-10-10	Borrow from	Mary	81234567

Figure 5.4.2: Edit loan

Format for editing Expenses: `edit expense <EXPENSE ID> [/d <DESCRIPTION>] [/t <DATE>] [/a <AMOUNT>] [/c <CATEGORY>] [/r <RECURRENCE RATE>]`

Examples:

- `edit expense 2 /a 4.50 /c food /r daily`



```
add expense Phone Bill $30 Bills /on 10/10/2019 /r monthly
Got it. I've added this expense:
```

ID	Description	Category	Date	Amount	Recurring
4	Phone Bill	BILLS	2019-10-10	\$30.00	MONTHLY

```
edit expense 4 /a 10 /c food /r daily
Successfully edited this expense:
```

ID	Description	Category	Date	Amount	Recurring
4	Phone Bill	FOOD	2019-10-10	\$10.00	DAILY

Figure 5.4.3: Example of editing an expense

	The category parameter only accepts Bills, Food, Transport, Shopping and Others as valid inputs.
	The rate of recurrence parameter only accepts Daily, Weekly, Monthly or No as valid inputs.

## 5.5 Deleting Data: *delete*

You can either delete your Contacts, Loans or Expenses to **WalletCLi** depending on your command.

Format for deleting Contacts: `delete contact <CONTACT ID>`

Examples:

- `delete contact 5`

```
delete contact 5
Noted. I've removed this contact:
```

ID	Name	Phone	Detail
5	john	81727183	brother 123@abc.com

Figure 5.5.1: Delete contact



Contact cannot be deleted if an existing loan entry uses it.

Format for deleting Loans: `delete loan <LOAN ID>`

Examples:

- `delete loan 1`

```
delete loan 1
Noted. I've removed this loan:
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
1	Yes	dinner	\$10.50	2019-10-10	Borrow from	Mary	81234567

Figure 5.5.2: Delete loan

Format for deleting Expenses: `delete expense <EXPENSE ID>`

Examples:

- `delete expense 2`



Use ***list*** command to view your loans, expenses or contacts first to retrieve the ID before deleting.

## 5.6 Completing Loans: *done*

You can mark your loans as settled in **WalletCLi**.

Format: `done loan <LOAN ID>`

Examples:

- `done loan 2`

```
This loan is now settled:
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	Yes	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278

Figure 5.6.1: Marking loan as settled

## 5.7 Setting Budget: *budget*

You can set your budget for each month in **WalletCLi**.

Format: `budget <AMOUNT> <MONTH/YEAR>`

Examples:

- `budget $400 02/2019`

```
budget $400 02/2019

400.0 dollars is the budget set for February 2019
Note that to update your budget, simply set the budget for the same month and year again.
```

Figure 5.7.1: Setting budget for February 2019



Setting `<AMOUNT>` to \$0 will remove the budget entry for the specified month/year.



It is best to set your budget first before adding expenses. However, if you already have expenses, **WalletCLi** will ask you if you would like your newly set budget to deduct from your existing expenses!



**Budget** involves only expenses; loans are not part of your budget!

## 5.8 Viewing Statistics: *view*

You can view your budget or statistics for each month in **WalletCLI**.

Format for viewing schedules: `view budget <MONTH/YEAR>`

Examples:

- `view budget 02/2019`

```
view budget 02/2019
This is the budget set for February 2019
$400.0
This is the budget left for February 2019
$400.0
```

Figure 5.8.1: Viewing budget for February 2019

Format for viewing statistics: `view stats [<DATE>]`

Examples:

- `view stats`

```
view stats
Please wait while we draw the pie chart...
```

#	Category	Expense Amount	%	Symbol
1	FOOD	50.0	7.69	%
2	BILLS	80.0	12.31	-
3	SHOPPING	510.0	78.46	@
4	TRANSPORT	10.0	1.54	*

```
-----
-@@@@@@@
----@@@@@@@@
----@@@@@@@@
----@@@@@@@@
%%-----@@@@@@@@@@@@
%%/%/%/%--@@@@@@@@@@@@
%%/%/%/%/%-@@@@@@@@@@@@
*****@@@@@@@@@@@@
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Here is a bar graph of money spent per day:
01/01/2019 | $120.00 |#####|
04/01/2019 | $10.00 |#|
04/05/2019 | $10.00 |#|
02/10/2019 | $10.00 |#|
02/11/2019 | $500.00 |#####|
```

Figure 5.8.2: Viewing the pie chart for all expenses made





The Date parameter is required to be in the format of “MM/yyyy”. E.g. 01/2019

## 5.9 Setting Reminders: *reminder*

You can enable or disable reminders for loans, upcoming expenses and remaining budget for the month in **WalletCLI**. You can also set how often you should get reminded by **WalletCLI**.

Format for enabling reminders: `reminder on`

```
reminder on
Got it. I've turned on reminders!
Reminder to settle your loans soon!
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
3	No	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278

Figure 5.9.1 Turning on reminders:

Format for disabling reminders: `reminder off`

```
reminder off
Got it. I've turned off reminders!
Auto reminder interrupted...
```

Figure 5.9.2: Turning off reminders

Format for setting frequency: `reminder set <TIME IN SECONDS>`

Examples:

- `reminder set 3600`

```
reminder set 3600
Got it. I've set reminders to notify every 3600 seconds
```

Figure 5.9.3: Setting reminders in intervals of 3600 seconds if reminders are turned off

```
Got it. I've set reminders to notify every 3600 seconds
Auto reminder interrupted...
Remember to settle your loans soon!
```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
1	No	lunch	\$10.00	2019-10-12	Borrow from	Mary	91837362
2	No	textbook	\$150.00	2019-10-11	Borrow from	Tom	81276251
3	No	dinner	\$8.00	2019-10-10	Lend to	Mary	91837362
4	No	phone bills	\$50.00	2019-10-11	Borrow from	Mary	91837362
5	No	groceries	\$15.00	2019-10-12	Borrow from	Mary	91837362

Figure 5.9.4: Setting reminders in intervals of 3600 seconds if reminders are turned on

## 5.10 Viewing command history: *history*

You can view the history of previously executed commands in **WalletCLI**.

Format: `history`

```

history
Command History from earliest to latest:
add loan lunch $100 21/09/2019 /b /c 2
edit loan 1 /d dinner /a 10.50 /t 10/10/2019 /c 1
delete loan 1
done loan 2
add loan lunch $100 21/09/2019 /b /c 2

```

Figure 5.10.3: Setting reminders in intervals of 1800 seconds

## 5.11 Undo previous command: *undo*

You can undo the previous command executed in **WalletCLI**.

Format: undo

```

add loan For business start up $1000 21/09/2019 /b /c 1
Got it. I've added this loan:

```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
4	No	For business start up	\$1000.00	2019-09-21	Borrow from	Mary	81234567

```

list loan
Here are the loans in your list:

```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	Yes	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278
3	No	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278
4	No	For business start up	\$1000.00	2019-09-21	Borrow from	Mary	81234567

```

undo
Reverting back to previous state...
list loan
Here are the loans in your list:

```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	Yes	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278
3	No	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278

Figure 5.11.1: Undo add loan command

## 5.12 Redo previous command: *redo*

You can redo the previous command executed in **WalletCLI**.

Format: redo

```

undo
Reverting back to previous state...
list loan
Here are the loans in your list:

```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	Yes	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278
3	No	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278

```

redo
Moving forward to later state...
list loan
Here are the loans in your list:

```

ID	Settled	Description	Amount	Date	Borrow/Lend	Contact Name	Contact Number
2	Yes	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278
3	No	lunch	\$100.00	2019-09-21	Borrow from	Gerald	972700278
4	No	For business start up	\$1000.00	2019-09-21	Borrow from	Mary	81234567

Figure 5.12.1 and Figure 5.12.2: Redo Command

## 5.13 Export: *export*

You can export expenses or loans from **WalletCLI** into csv files. It will be stored under your home folder (mentioned in Section 4. Quick Start). The file names will be in this format walletcli-[type of data exported]-[date exported]-[time exported].csv. Sample files can be found at this [link](#).

data		26/10/2019 4:50 PM
importExpenses		26/10/2019 1:56 PM
importLoans	Exported Files	26/10/2019 1:56 PM
WalletCLI-expenses-07.11.2019-11.51.36		7/11/2019 11:51 AM
WalletCLI-loans-07.11.2019-11.51.21		7/11/2019 11:51 AM
WalletCLI-v1.4	Jar File	7/11/2019 8:30 AM

Figure 5.13.1: Exported Files in **WalletCLI** Home directory

Format for expenses: `export expense <MONTH/YEAR>`



MONTH/YEAR has to be keyed in the format of MM/yyyy. It is to indicate the month in which you want to retrieve expense records from.

Example:

- `export expense 11/2019`  
Exports expense records for November 2019. Total amount spent and budget values (if any) will be included in the exported file as well.

```
export expense 11/2019
Export success! File saved to -> C:\Users\final\Downloads\WalletCli\WalletCLI-expenses-11.11.2019-10.01.14.csv
```

Figure 5.13.2: Exporting Expenses

Month	Nov-19					
Budget Set	\$1,000.00					
Budget Left	\$966.90					
Total Spent	\$33.10					
S/N	Description	Amount(\$	Date	Category	Recur	Frequency
1	ĩ»¿shirt	17	7/11/2019	SHOPPING	no	
2	supper	2.6	30/11/2019	FOOD	no	
3	phone bill	13.5	9/11/2019	BILLS	yes	MONTHLY

Figure 5.13.3: Exported expense file viewed in Excel

```
"Month","11/2019"
"Budget Set","$1000.0"
"Budget Left","$966.9"
"Total Spent","$33.1"
"S/N","Description","Amount($)","Date","Category","Recur","Frequency"
"1","shirt","17.0","07/11/2019","SHOPPING","no",""
"2","supper","2.6","30/11/2019","FOOD","no",""
"3","phone bill","13.5","09/11/2019","BILLS","yes","MONTHLY"
```

Figure 5.13.4: Exported expense file viewed in Notepad



As seen in Figure 5.13.3, due to some encoding issues, extra characters like `ĩ»¿` may appear when data is exported.

Format for loans: `export loan`

```
export loan
Export success! File saved to -> C:\Users\final\Downloads\WalletCli\WalletCli-loans-07.11.2019-12.02.57.csv
```

Figure 5.13.5: Exporting Loans

S/N	Description	Amount(\$)	Created Date	Name	Phone	Other Details	Lend/Borrow	Settled
1	lunch	30	1/10/2019	Lauren			lend	yes
2	dinner	15.5	2/10/2019	Ben		brother	borrow	no
3	breakfast	1.5	15/10/2019	Jane	90181829		borrow	yes
4	supper	25	23/10/2019	Ryan Tang	(+65)81731829		lend	no

Figure 5.13.6: Exported loan file viewed in Excel

```
"S/N","Description","Amount($)","Created Date","Name","Phone","Other Details","Lend/Borrow","Settled"
"1","lunch","30.0","01/10/2019","Lauren","","","lend","yes"
"2","dinner","15.5","02/10/2019","Ben","","brother","borrow","no"
"3","breakfast","1.5","15/10/2019","Jane","90181829","","borrow","yes"
"4","supper","25.0","23/10/2019","Ryan Tang","(+65)81731829","","lend","no"
```

Figure 5.13.7: Exported loan file viewed in Notepad



As seen in Figure 5.13.6, due to some encoding issues, extra characters like `ï»¿` may appear when data is exported.

## 5.14 Import: *import*

You can create expenses or loan records in csv files and import them from your home directory (mentioned in Section 4. Quick Start) into **WalletCLI**. Sample files can be found at this [link](#) and you can try importing them into **WalletCLI**.

data		26/10/2019 4:50 PM
importExpenses	Store your csv files in home directory before import	26/10/2019 1:56 PM
importLoans		26/10/2019 1:56 PM
WalletCli-expenses-07.11.2019-12.04.04		7/11/2019 12:04 PM
WalletCli-loans-07.11.2019-12.02.57		7/11/2019 12:02 PM
WalletCLI-v1.4	Jar file	7/11/2019 8:30 AM

Figure 5.14.1: Sample Files in Home Directory

Format: `import <loan OR expense> <FILENAME>`

Example:

- `import loan importLoans.csv`  
Importing loans from sample csv file, importLoans.csv.

```

Importing records...

Got it. I've added this contact:
[ID: 5]Lauren
Got it. I've added this loan:
[ID: 5][Settled][Lend] i»¿lunch Amount:$30.0 Date:01 Oct 2019[Contact: [ID: 5]Lauren ]

Got it. I've added this contact:
[ID: 6]Ben brother
Got it. I've added this loan:
[ID: 6][Not Settled][Borrow] dinner Amount:$15.5 Date:02 Oct 2019[Contact: [ID: 6]Ben brother ]





Got it. I've added this contact:
[ID: 7]Jane 90181829
Got it. I've added this loan:
[ID: 7][Settled][Borrow] breakfast Amount:$1.5 Date:15 Oct 2019[Contact: [ID: 7]Jane 90181829]

Got it. I've added this contact:
[ID: 8]Ryan Tang (+65)81731829
Got it. I've added this loan:
[ID: 8][Not Settled][Lend] supper Amount:$25.0 Date:23 Oct 2019[Contact: [ID: 8]Ryan Tang (+65)81731829]

Finish Import!

```

Figure 5.14.2: Importing Loans

	Key in only the filename and csv extension for FILENAME e.g. marExpenses.csv
	File name should not contain any spaces
	When importing loans, <b>WalletCLI</b> will create a new contact in the application based on the contact information detected in each row of the csv file. <i>Merging of duplicate contact records will be implemented in future releases.</i>
	As seen in Figure 5.14.2, due to some encoding issues, extra characters like i»¿ may appear when data is imported.

### 5.14.1 Expense csv Format

This section explains how expenses records should be formatted in csv (comma-separated values) before importing into **WalletCLI**.

A	B	C	D	E	F
shirt	7/10/2019	17	SHOPPING		
supper	9/10/2019	13.5	FOOD	yes	MONTHLY
phone bill	30/10/2019	2.6	BILLS		

Figure 5.14.1.1: Expense Records CSV in Excel View

```

shirt,07/10/2019,17,SHOPPING
supper,09/10/2019,13.5,FOOD,yes,MONTHLY
phone bill,30/10/2019,2.6,BILLS




```

Figure 5.14.1.2: Expense Records CSV in Notepad View

For each row of expense record, it should be formatted in this order:

- 1) Description

- 2) Date(dd/MM/yyyy)
- 3) Amount (digits)
- 4) Category (in capital letters). The following categories are allowed:
  - a) FOOD
  - b) TRANSPORT
  - c) BILLS
  - d) SHOPPING
  - e) OTHERS
- 5) (Optional) Recurring Record: Indicate a recurring record by keying in yes.
- 6) (Optional) Frequency: If record is recurring, key in the frequency in capital letters. Choose one of the following:
  - a) DAILY
  - b) WEEKLY
  - c) MONTHLY

	Recurring Record requires a Frequency specified on the same row.
	The input for Recurring Record should be only yes. Any other values keyed in for Recurring Record and Frequency will be ignored and the record will be treated as a non-recurring expense when importing into <b>WalletCLI</b> .
	For Windows Users, if you wrote the csv in Microsoft Excel, do double-check the format of Date in text editors, e.g. Notepad. By default, Excel may store the value of Date in d/MM/yyyy format instead.

### 5.14.1 Loan csv Format

This section explains how loan records should be formatted in csv (comma-separated values) before importing into **WalletCLI**.

	A	B	C	D	E	F	G	H
1	lunch	1/10/2019	30	lend	yes	Lauren		
2	dinner	2/10/2019	15.5	borrow	no	Ben	brother	
3	breakfast	15/10/2019	1.5	borrow	yes	Jane		90181829
4	supper	23/10/2019	25	lend	no	Ryan Tang	123@abc.com	(+65)81731829

Figure 5.14.1.1: Loan Records CSV in Excel View




```
lunch,01/10/2019,30,lend,yes,Lauren
dinner,02/10/2019,15.5,borrow,no,Ben,brother
breakfast,15/10/2019,1.5,borrow,yes,Jane,,90181829
supper,23/10/2019,25,lend,no,Ryan Tang,123@abc.com,(+65)81731829
```

Figure 5.14.1.2: Loan Records CSV in Notepad View

For each row of loan record, it should be formatted in this order:



- 1) Description
- 2) Date(dd/MM/yyyy)
- 3) Amount (digits)
- 4) Type. Choose either of the following:
  - a) lend
    - i) Indicates that you lend someone the money

- b) borrow
    - i) Indicates that you borrow money from someone
- 5) Settled (i.e. whether the loan is settled). Choose either of the following:
  - a) yes
    - i) Indicates loan is settled
  - b) no
    - i) Indicates loan is not settled
- 6) Name of Contact
- 7) (Optional) Contact Details
- 8) (Optional) Phone Number

	<b>WalletCLI</b> does not check if the phone number is just only digits, thus allowing you to input phone number in your own preferred format e.g. (+65)8543 2124, 98765432, 6543-2315
	If you want to exclude Contact Details but include Phone Number, leave the Phone Number out. E.g. if you are writing in a text editor, write the loan entry in this way: breakfast,15/10/2019,1.5,borrow,yes,Jane,,90181829
	For Windows Users, if you wrote the csv in Microsoft Excel, do double-check the format of Date in text editors, e.g. Notepad. By default, Excel may store the value of Date in d/MM/yyyy format instead.

## 5.15: Currency exchange: *currency*

You can switch your current expenses and loans currency in **WalletCLI**. You can view the list of available currency that you can switch to at this [link](#).

	When you switch currency based on a particular country, the expenses and loans with the new converted amount will not be saved in your data, as this currency exchange only changes the amount for your viewing during the entire session when using <b>WalletCLI</b> .
	Keep in mind that the change in currency in <b>WalletCLI</b> will not change the dollar symbol. Such feature will only be available in v2.0.

Format: currency <country>

Example:



- Currency south korea

```
list expense
Here are the expenses in your list:
-----
| ID | Description | Category | Date | Amount | Recurring |
-----
| 1 | dinner | FOOD | 2019-01-01 | $40.00 | No |
-----
Total amount spent: $40.00
currency south korea
Your currency is converted to the country of south korea
You can add or modify your own currency conversion in /currency.txt
list expense
Here are the expenses in your list:
-----
| ID | Description | Category | Date | Amount | Recurring |
-----
| 1 | dinner | FOOD | 2019-01-01 | $34380.00 | No |
-----
Total amount spent: $34380.00
```

Figure 5.15.1: Converting currency

### 5.16: Generating default data: *generate*

You can create a set of default data in **WalletCLi..**

	If you accidentally created a set of default data and want to go back to your previous state, typing in the command <i>undo</i> will revert the state before the storage is filled with default values.
	Keep in mind that this command is not particular useful if you are regular user. This command is meant for software development testing teams.

Format: generate

```

WALLETCLI
Hello! Welcome to the WalletCLI Application!
What can I do for you?

Turning off auto reminders because all loans have been settled!
generate
No saved budget found.
No saved expenses found.
No saved contacts found.
No saved loans found.
All previous data has been wiped. Inserting default data...

```

Figure 5.16.1 Starting WalletCLI from a clean slate and generating default data.

## 6. Future Enhancements [coming in v2.0]

Though the current implementation has much flexibility, there is more that can be done to elevate user experience to the next level. These are some possible enhancements:



1. Allowing users to make direct transactions from **WalletCLI** when shopping online.
2. You can create and edit your commands in **WalletCLI**.
3. **WalletCLI** can sync with the user's bank account to provide more convenience and more monitoring.
4. Users can receive cashback when they save money to further lower their expenses.
5. Flexible syntax for command to increase ease of use.

## 7. FAQ

---

This section provides answers to some frequently asked questions of users.

Q: Where are my data stored?

A: All your data are stored in the `/data` directory.

Q: How do I transfer my data to another computer?

A: To transfer your data to another computer, you should:

1. Install the app on the other computer
2. Transfer `/data` from your old **WalletCLI** folder and place it into the new **WalletCLI** folder.

## 8. Command Summary

---

This section provides a quick reference for all commands available in **WalletCLI**.

### 8.1 General Commands

Here is a list of general commands that you might find useful in helping you to use and configure **WalletCLI**:

Task	Purpose	Command Format	Example
Help	Displays a list of help sections	help	help
Help Section	Displays the content of a help section	help <SECTION INDEX>	help 5
Exit	Exits the application	bye	bye
Set budget	Sets budget for the given month	budget <AMOUNT> <DATE>	Budget \$400 02/2019
Set reminder	Enable or disable reminders, and change reminder interval.	reminder </on or /off or /t <RATE>>	reminder /t 30min
View statistics	View statistics of expenses for given month	view stats [<DATE>]	view stats
Redo	Redo the previous command executed	redo	redo
Undo	Undo the previous command executed	undo	undo
View command history	View the command history	history	history

### 8.2 Viewing Data Commands

Here is a list of commands for viewing your data in **WalletCLI**:

Task	Purpose	Command Format	Example
List expenses	List all expenses in the application	list expense	list expense
List loans	List all loans in the application	list loan	list loan
List contacts	List all contacts in the application	list contact	list contact

List all	List all expenses, loans and contacts in the application	list all	list all
List data with specific date	List all expenses and loans with the specified date	list <DATE>	List 01/01/2019

## 8.3 Expense Management Commands

Here is a list of commands for managing your expenses in **WalletCLI**:

Task	Purpose	Command Format	Example
Add expense	Add an expense	add expense <DESCRIPTION> <AMOUNT> <CATEGORY> [/on <DATE>] [/r <RECURRENCE RATE>]	add expense bills \$10 bills /on 01/02/2019 /r monthly
Edit expense	Edit an expense	edit expense <EXPENSE ID> [/d <DESCRIPTION>] [/t <DATE>] [/a <AMOUNT>] [/c <CATEGORY>] [/r <RECURRENCE RATE>]	edit expense 2 /a 4.50 /c food /r daily
Delete expense	Delete an expense	delete expense <EXPENSE ID>	Delete expense 2

## 8.4 Loan Management Commands

Here is a list of commands for managing your loans in **WalletCLI**:

Task	Purpose	Command Format	Example
Add loan	Add a loan	add loan <DESCRIPTION> <AMOUNT> [<DATE>] [</l or /b>]	add loan lunch \$5.00 01/01/2019 /l
Edit loan	Edit a loan	edit loan <LOAN ID> [/d <NEW DESCRIPTION>] [/a <NEW AMOUNT>] [/t <NEW DATE>] [</l or /b>] [/c <CONTACT ID>]	edit loan 0 /d dinner /a \$50.00 /l /c 1
Delete loan	Delete a loan	delete loan <LOAN ID>	delete loan 2

## 8.5 Contact Management Commands

Here is a list of commands for managing your contacts in **WalletCLI**:

Task	Purpose	Command Format	Example
Add contact	Add a contact	add contact <NAME> [/d <DETAILS>] [/p <PHONE NUMBER>]	add contact david /d friends /p 12345678

Edit contact	Edit a contact	edit contact <CONTACT ID> [/n <NEW NAME>] [/d <NEW DETAILS>] [/p <NEW PHONE NUMBER>]	edit contact 1 /n notdavid /d sister /p 87654321
Delete contact	Delete a contact	delete contact <CONTACT ID>	delete contact 2

## 8.6 Porting Data Commands

Here is a list of commands for exporting or importing data in **WalletCLI**:

Task	Purpose	Command Format	Example
Export Loans	Exporting loans to csv	export loan	export loan
Export Expenses	Exporting expenses of a month (MM/yyyy) to csv	export expense <MONTH/YEAR>	export expense 10/2019
Importing data	Importing data (either loans or expenses) from csv	import <loan OR expense> <FILENAME>	import expense marExpenses.csv

## 8.7 Currency Conversion Commands

Here is a list of commands for converting currencies in **WalletCLI**:

Task	Purpose	Command Format	Example
Convert currency	To view expenses and loans amount in different currencies	currency <country>	currency italy

## 8.8 Creating Default Data Command

The following table shows the command for generating default data in **WalletCLI**:

Task	Purpose	Command Format	Example
Generating default data	Mainly for the test teams' use to create default data	generate	generate