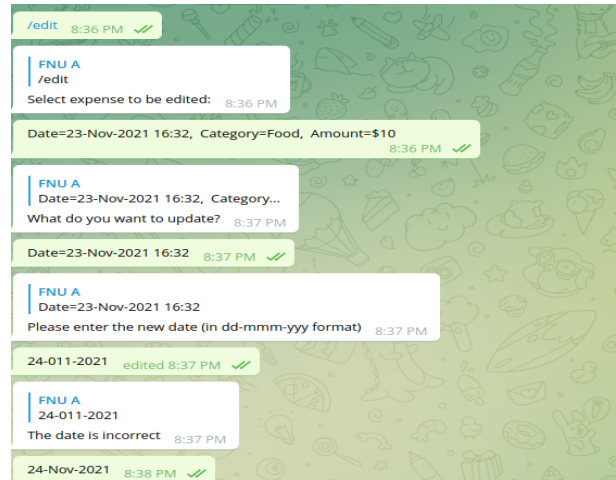


How the new version is better than the old

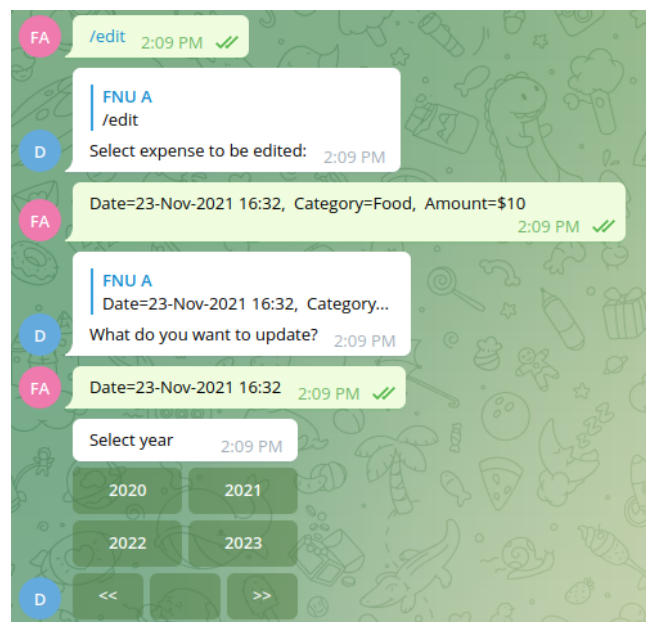
We implemented several new features in this version. We describe them with screenshots next.

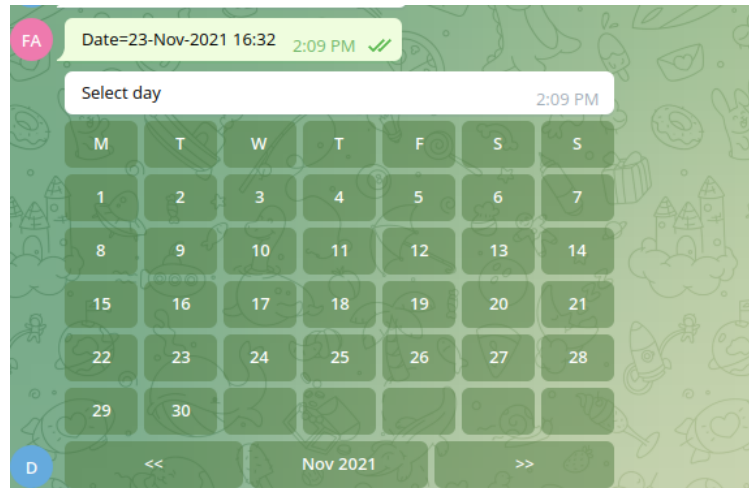
1. Date Input Feature:

The method for date input in the previous version is a keyboard input in dd-mm-yyyy format



The calendar is implemented to take input for the date from the user. It is more efficient and flexible for the user to choose a date and not type it out

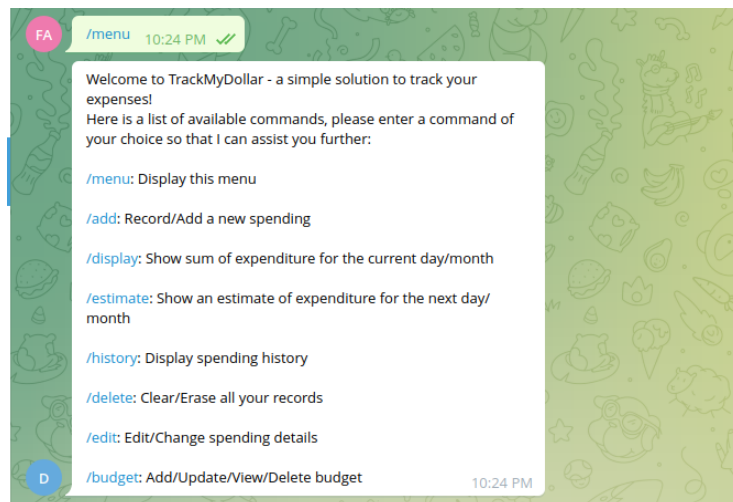




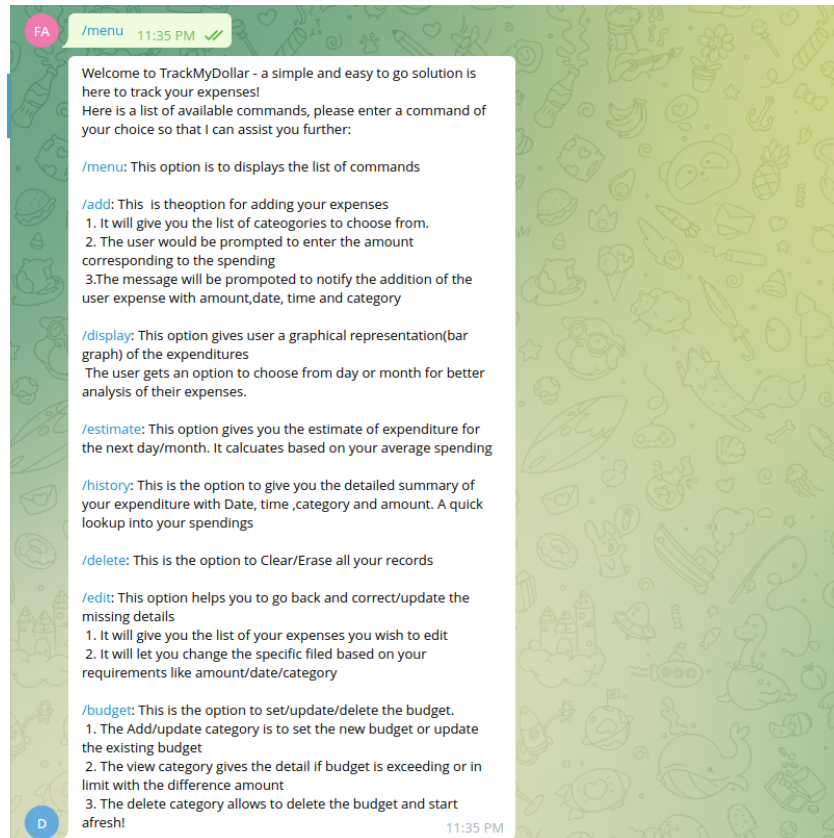
Corresponding Issue: https://github.com/usmanwardag/dollar_bot/issues/15

2. The Detailed BOT messages

The initial BOT messages were very precise and did not have a detailed explanation of what they are doing



The new BOT messages are detailed and self-explanatory of what they are doing to give users a smooth experience in understanding and choosing the desired options

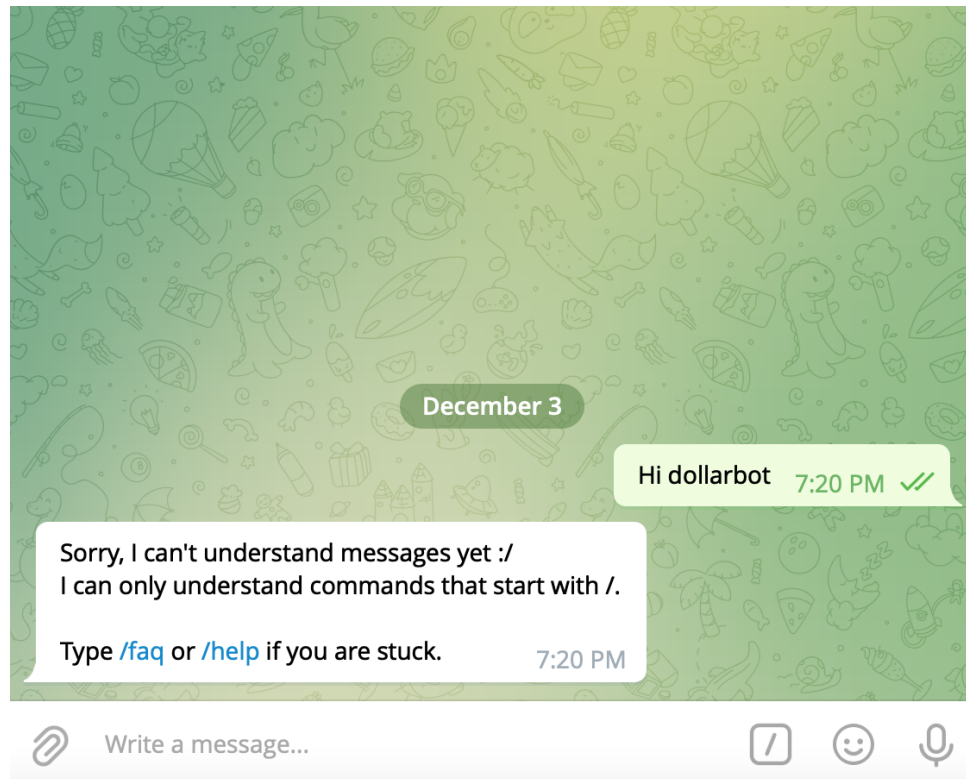


Corresponding Issue: https://github.com/usmanwardag/dollar_bot/issues/9

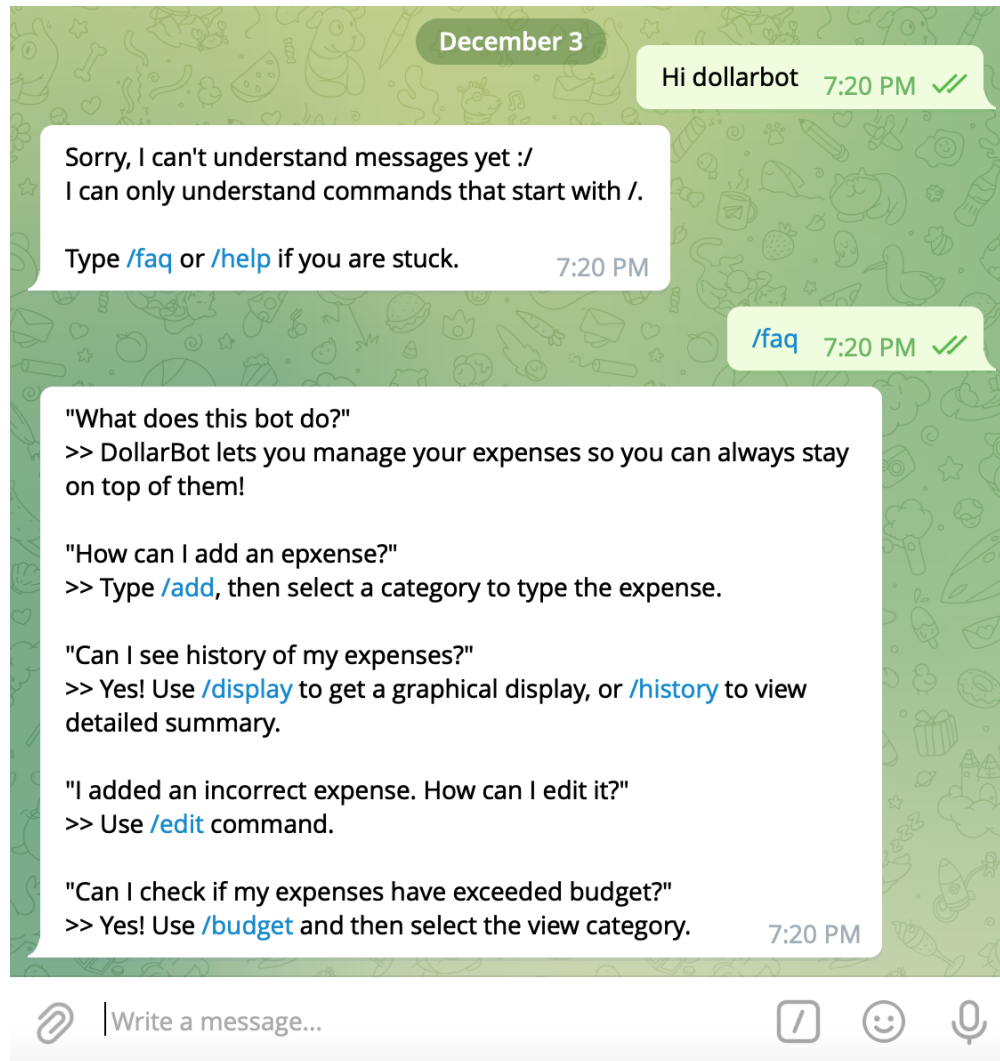
3. Clean UX and UI

We cleaned up the UX and UI to make it easy for the user to onboard and understand various options.

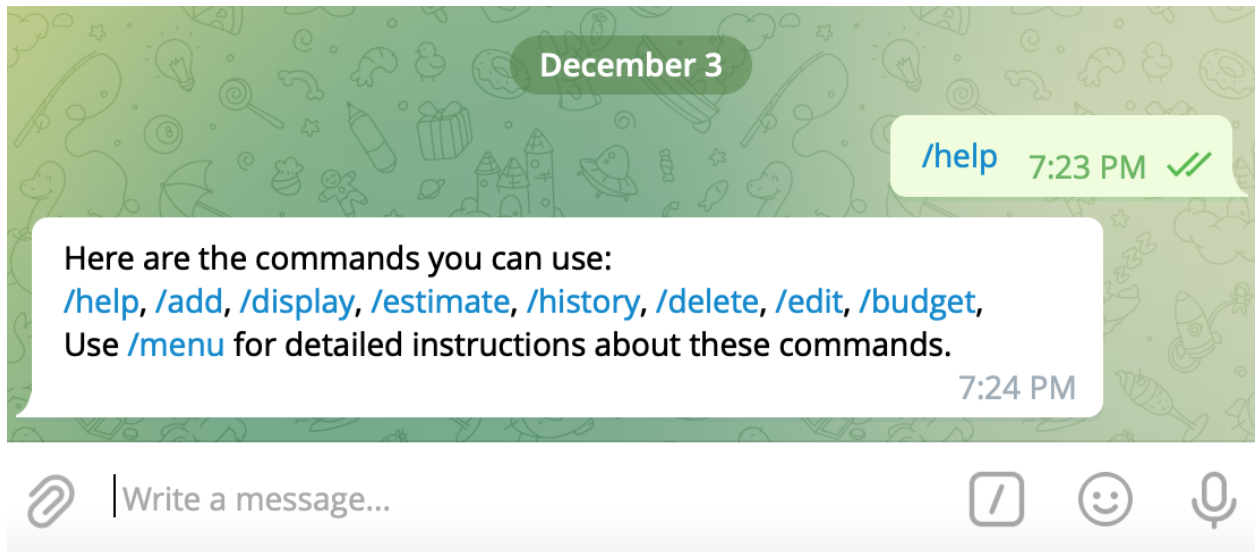
First, we addressed the corner case where the user may type a certain message. In the previous version, they did not get any response back. We fixed this.



To further facilitate the user, we added an /faq option for frequently asked questions.



We also added a help command to provide users with a quick overview of various commands, without providing too many details.

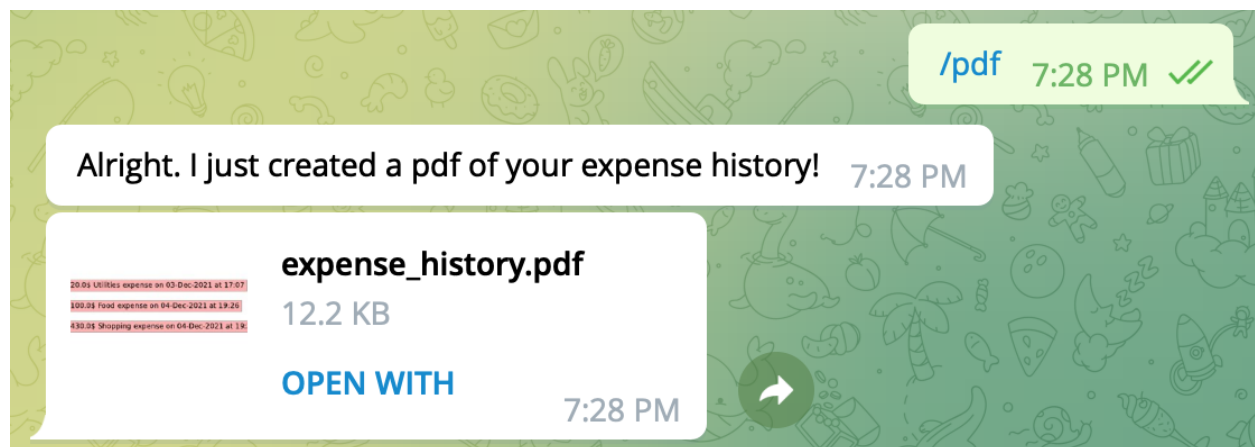


4. Auto Bot Execution at Startup / Boot

One of the issues in the previous version was that the user had to manually start the script each time at reboot/startup. To address this, we (i) created a shell script that executes the Python code, and (ii) provided instructions in README to integrate the shell script in the .bashrc file.

5. Generating PDF report

We can generate a PDF report for the user with /pdf command.



Below is an example of what the pdf looks like:

20.0\$ Utilities expense on 03-Dec-2021 at 17:07

100.0\$ Food expense on 04-Dec-2021 at 19:26

430.0\$ Shopping expense on 04-Dec-2021 at 19:27

6. Python Code Documentation

Initially, .md files were created only for the functions used in the python files, we added documentation for the functions within the python files themselves. It is easier to read and understand now.

add.py

```
#
import helper
import logging
from telebot import types
from datetime import datetime
```

```
option = {}
```

```
#
```

Documentation of add.py

```
def run(message, bot):
```

```
#
```

run(message, bot): This is the main function used to implement the add feature. It pop ups a menu on the bot asking the user to choose their expense category, after which control is given to post_category_selection(message, bot) for further processing. It takes 2 arguments for processing - message which is the message from the user, and bot which is the telegram bot object from the main code.py function.

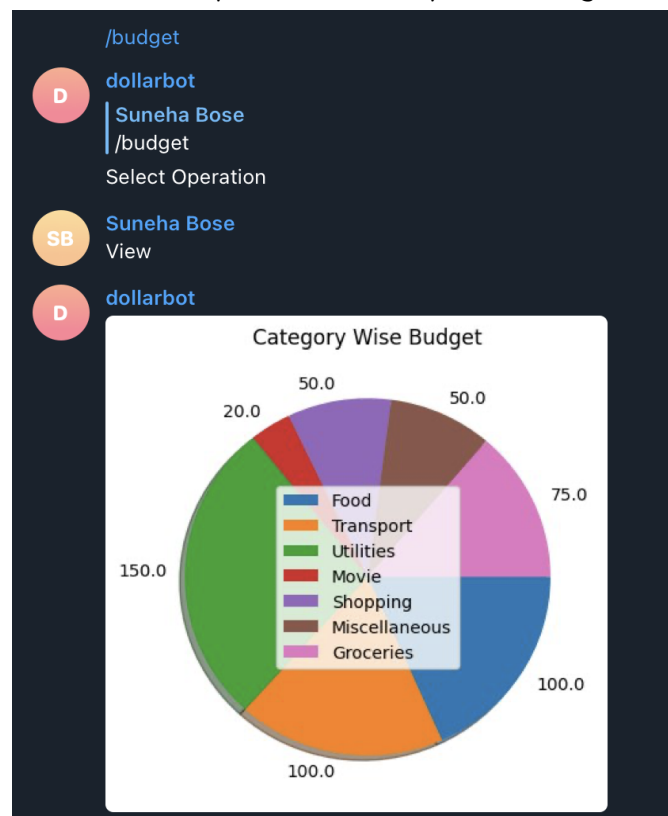
```
    helper.read_json()
    chat_id = message.chat.id
    option.pop(chat_id, None) # remove temp choice
    markup = types.ReplyKeyboardMarkup(one_time_keyboard=True)
    markup.row_width = 2
    m = bot.send_message(chat_id, "Do you want to add a new categories? Y/N")
    bot.register_next_step_handler(
        m, post_user_def_category, bot)
```

```
#
```

```
user_input = m.text print(m) print(user_input) if str(user_input)=="Y": print("Hello") message1=bot.send_message(chat_id, "Please enter your category")
selected_category=message1.text helper.spend_categories.append(selected_category) print(selected_category) bot.register_next_step_handler(selected_category,
post_category_selection, bot) for c in helper.getSpendCategories(): markup.add(c) msg = bot.reply_to(message, 'Select Category', reply_markup=markup)
bot.register_next_step_handler(msg, post_category_selection, bot)
```

7. New Budget Chart

Earlier the budget was coming as a plain string, which was difficult to interpret. Now we have introduced a colorful pie chart to analyze the budget easily.



8. Notification for exceeding budget

Now a notification is sent to the telegram each time the user exceeds his budget in any category.

SB Suneha Bose
Food

D dollarbot
How much did you spend on Food?
(Enter numeric values only)

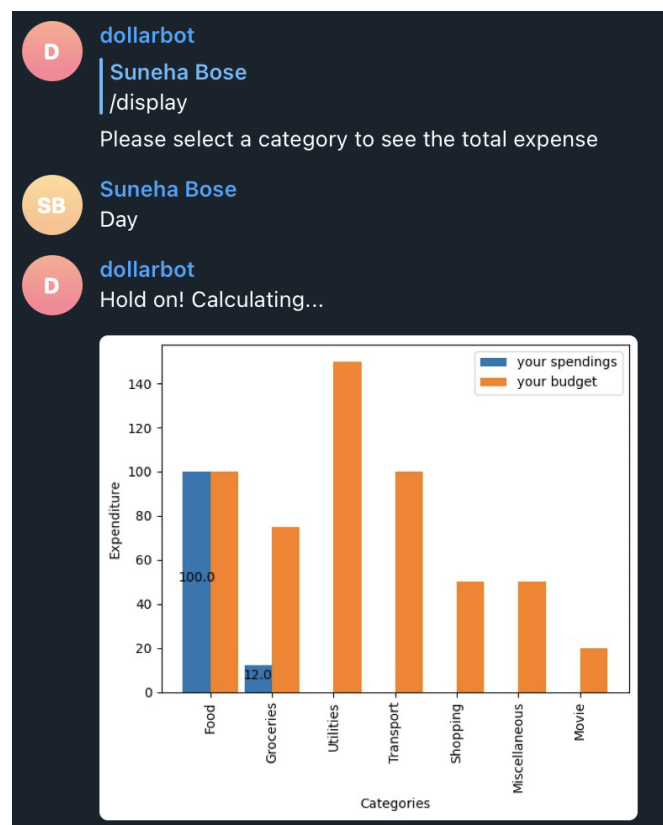
SB Suneha Bose
50

D dollarbot
The following expenditure has been recorded: You have spent \$50.0 for Food on 04-Dec-2021 19:56

Budget for Food exceeded by \$12.0 !!!!

9. Expenditure Vs. Budget graph

Previously we used to get only the expenditure bar graph, now we have introduced the budget bar too, for keeping track of the budget



10. User-defined categories:

The earlier version had some predefined categories. We introduced this new feature of adding custom categories which allow the user to add their own categories which can be then used to add expenses.

← kk
bot



December 4

/add 9:53 PM ✓

Do you want to add a new category? Y/N 9:53 PM

N 9:53 PM ✓

Kriti
N

Select Category 9:53 PM



Write a message...



Food

Groceries

Utilities

Transport

← kk
bot



/add 9:54 PM ✓✓

Do you want to add a new category? Y/N 9:54 PM

Y 9:54 PM ✓✓

Please enter your category 9:54 PM

Fruits 9:54 PM ✓✓

Kriti
Fruits
Select Category 9:54 PM

Write a message...



Transport

Shopping

Miscellaneous

Fruits