

## Project 2 - DollarBot

**Group Number: 28**

### Group Members

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Built with

# DollarBot

Smartly, effortlessly



## About

DollarBot is a comprehensive financial assistant accessible directly on the Telegram platform, designed to make personal finance management seamless and effective. By integrating with a familiar chat interface, DollarBot allows users to track expenses, set and monitor budgets, and plan financial goals all in one place. Newly added key features include **detailed spending insights** that help users identify where their money goes, **real-time currency conversion** for those managing finances across borders, and automated reminders when spending nears set **budget limits**. DollarBot also offers predictive analytics, suggesting trends based on past spending patterns to help users make proactive financial decisions.

DollarBot's **user-friendly design** brings financial management into everyday life, making it simple and accessible for everyone. Rather than complex spreadsheets or apps, DollarBot provides an intuitive approach to budgeting that fits seamlessly into daily routines. A **recent update also added 101 test cases** to ensure robust performance across all features, bringing **the total number of test cases to 222**. Whether aiming to save for a goal or seeking better control over spending, DollarBot transforms financial planning into an interactive experience, helping users stay organized and motivated with every message.

## What's Better

- **Insight:** DollarBot provides deep insights by analyzing spending patterns over time, helping users understand their financial behavior. It doesn't just log expenses but provides detailed insights into how users allocate their funds, highlighting key trends, peak spending periods, and areas for potential savings. With detailed feedback, users can make informed adjustments to improve their financial health.
- **New Visualization:** With a focus on clarity and accessibility, DollarBot uses advanced data visualization tools to transform complex financial information into easy-to-understand charts, graphs, and infographics. This approach allows users to see an instant snapshot of their financial status, making it easy to spot spending trends, compare expenses across categories, and monitor progress toward financial goals. This intuitive visualization makes managing finances more engaging and less overwhelming.
- **Budget Limit:** DollarBot's budget cap feature allows users to set monthly spending limits. As users approach their budget limits, DollarBot sends alerts, enabling them to make immediate adjustments to avoid exceeding set thresholds. This feature supports users staying within their budget, ultimately aiding them in achieving their long-term financial objectives.
- **Currency Support:** DollarBot includes multi-currency compatibility, accommodating users who manage finances across different countries or currencies, whether they are traveling, managing investments abroad, or tracking international expenses. Integrated real-time exchange rates provide accurate conversions, ensuring that users get up-to-date information for international transactions and budgeting, bringing an added layer of convenience to global financial planning.

## Future Scope

- **Auto-save to Google Drive:** Seamlessly back up your expenditure records to Google Drive. This feature lets you link your Google Drive account to DollarBot and automatically saves expense records, CSV exports, and reports in a dedicated folder. Access your financial history anytime, anywhere.
- **Smart Savings Goals:** Set personalized savings goals within DollarBot. As you record expenses, DollarBot will calculate your progress toward these goals, sending you reminders or encouraging messages to stay on track. Perfect for users saving for specific items, trips, or future plans.
- **Spending Challenges and Rewards:** Participate in spending challenges like "No-Spend Weekends" or "Save \$50 a Week." DollarBot tracks your progress, provides motivational updates, and rewards you with badges or points when you meet your goals. Great for those who need an extra push to stay financially disciplined!
- **Bill Reminders and Tracking:** Avoid late fees by setting up reminders for upcoming bills. DollarBot will remind you when due dates are near and can even record recurring bills for easy tracking.
- **Cash Flow Analysis:** Gain insight into your cash flow by categorizing income and expenses. DollarBot helps you identify trends in your spending and income, giving you a monthly or weekly overview of your cash flow status.
- **Year-End Financial Summary:** Receive a detailed financial summary at the end of each year, which includes total income, expenses by category, savings achieved, and insights on how spending changed over the months.

## More Info

Scan the QR code on the left to watch our demo video and see DollarBot in action! Explore how it simplifies expense tracking, budgeting, and financial management with real-life examples. To access our repository, simply scan the QR code on the right.



Repo



Demo



**Repo link**

<https://github.com/vegechick510/DollarBot>

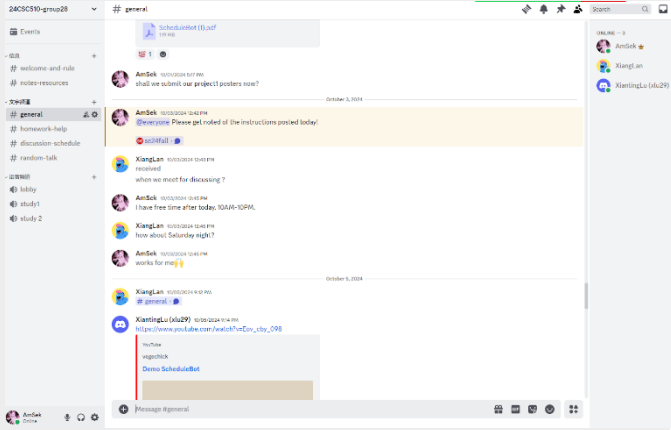


## Evaluation Table

Total Points: 104/105

Rubric	Score	Evidence
Workload is spread over the whole team (one team member is often Xtimes more productive than the others...	3	<a href="https://github.com/vegechick510/DollarBot/pulse">https://github.com/vegechick510/DollarBot/pulse</a>
but nevertheless, here is a track record that everyone is contributing a lot)	3	<a href="https://github.com/vegechick510/DollarBot/pulse">https://github.com/vegechick510/DollarBot/pulse</a>
Number of commits	3	<a href="https://github.com/vegechick510/DollarBot/graphs/commit-activity">https://github.com/vegechick510/DollarBot/graphs/commit-activity</a>
Number of commits: by different people	3	<a href="https://github.com/vegechick510/DollarBot/graphs/contributors?from=9%2F28%2F2024">https://github.com/vegechick510/DollarBot/graphs/contributors?from=9%2F28%2F2024</a>
Issues reports: there are many	3	<a href="https://github.com/vegechick510/DollarBot/issues?q=is%3Aissue+is%3Aopen">https://github.com/vegechick510/DollarBot/issues?q=is%3Aissue+is%3Aopen</a>
Issues are being closed	3	<a href="https://github.com/vegechick510/DollarBot/issues?q=is%3Aissue+is%3Aclosed">https://github.com/vegechick510/DollarBot/issues?q=is%3Aissue+is%3Aclosed</a>
Docs: doco generated, format not ugly	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/docs/whats-new.md">https://github.com/vegechick510/DollarBot/blob/main/docs/whats-new.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_currency.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_currency.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_budget.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_budget.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_insight.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_insight.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_visualization.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_visualization.md</a>
Docs: what: point descriptions of each class/function (in isolation)	3	<p>Please see the 'Implementation' sections in these docs:</p> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/whats-new.md">https://github.com/vegechick510/DollarBot/blob/main/docs/whats-new.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_currency.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_currency.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_budget.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_budget.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_visualization.md">https://github.com/vegechick510/DollarBot/blob/main/docs/ocs/new_visualization.md</a>

		<a href="#">ocs/new_insight.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_visualization.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_visualization.md</a>
<b>Docs: how: for common use cases X,Y,Z mini-tutorials showing worked examples on how to do X,Y,Z</b>	3	<p>Please see the 'Usage Examples' sections in these docs:</p> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_currency.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_currency.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_budget.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_budget.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_insight.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_insight.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_visualization.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_visualization.md</a>
<b>Docs: why: docs tell a story, motivate the whole thing, deliver a punchline that makes you want to rush out and use the thing</b>	3	<p>Please see the 'Benefits' sections in these docs:</p> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_currency.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_currency.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_budget.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_budget.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_insight.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_insight.md</a> <a href="https://github.com/vegechick510/DollarBot/blob/main/docs/new_visualization.md">https://github.com/vegechick510/DollarBot/blob/main/docs/new_visualization.md</a>
<b>Docs: short video, animated, hosted on your repo. That convinces people why they want to work on your code.</b>	3	<a href="https://dollarbotgroup28.my.canva.site/">https://dollarbotgroup28.my.canva.site/</a>
<b>Use of version control tools</b>	3	<p>We do version control tools including github and doi archive.</p> <a href="https://github.com/vegechick510/DollarBot">https://github.com/vegechick510/DollarBot</a> <a href="https://zenodo.org/records/14018912">https://zenodo.org/records/14018912</a>
<b>Test cases exist</b>	3	<p>New add 101 test case (from origin 121 to 222 test case)</p> 
<b>Test cases are routinely executed</b>	3	<p>The test cases are in this directory:</p> <a href="https://github.com/vegechick510/DollarBot/tree/main/test">https://github.com/vegechick510/DollarBot/tree/main/test</a> <p>Test cases are routinely executed by pytest action:</p>

		<a href="https://github.com/vegechick510/DollarBot/actions/workflows/pytest.yml">https://github.com/vegechick510/DollarBot/actions/workflows/pytest.yml</a>
Issues are discussed before they are closed	3	<a href="https://github.com/vegechick510/DollarBot/issues/15">https://github.com/vegechick510/DollarBot/issues/15</a>
Chat channel: exists	3	<a href="https://discord.com/channels/1287556739012628563/1287556740178513924">https://discord.com/channels/1287556739012628563/1287556740178513924</a> 
Test cases: a large proportion of the issues related to handling failing cases.	3	<a href="https://github.com/vegechick510/DollarBot/tree/main/test">https://github.com/vegechick510/DollarBot/tree/main/test</a> <p>Here are some examples of issues concerning about the failed test cases:</p> <a href="https://github.com/vegechick510/DollarBot/issues/7">https://github.com/vegechick510/DollarBot/issues/7</a> <a href="https://github.com/vegechick510/DollarBot/issues/8">https://github.com/vegechick510/DollarBot/issues/8</a> <a href="https://github.com/vegechick510/DollarBot/issues/11">https://github.com/vegechick510/DollarBot/issues/11</a> <a href="https://github.com/vegechick510/DollarBot/issues/14">https://github.com/vegechick510/DollarBot/issues/14</a> <a href="https://github.com/vegechick510/DollarBot/issues/15">https://github.com/vegechick510/DollarBot/issues/15</a>
Evidence that the whole team is using the same tools: everyone can get to all tools and files	3	<p>The main workplace is at github organization repo:</p> <a href="https://github.com/vegechick510/DollarBot">https://github.com/vegechick510/DollarBot</a>
Evidence that the whole team is using the same tools (e.g. config files in the repo, updated by lots of different people)	3	<p>The main workplace is at github organization repo:</p> <a href="https://github.com/vegechick510/DollarBot">https://github.com/vegechick510/DollarBot</a>
Evidence that the whole team is using the same tools (e.g. tutor can ask anyone to share screen, they demonstrate the system running on their computer)	3	<p>The main workplace is at github organization repo:</p> <a href="https://github.com/vegechick510/DollarBot">https://github.com/vegechick510/DollarBot</a>

<b>Evidence that the members of the team are working across multiple places in the code base</b>	3	<p>In the initial time of the project, we implemented features in separate branches and merged them to the main branch.</p> <p>Here are the branches:  <a href="https://github.com/vegechick510/DollarBot/branches">https://github.com/vegechick510/DollarBot/branches</a></p>
<b>Short release cycles</b>	2	
<b>The file .gitignore lists what files should not be saved to the repo. See [examples](https://github.com/github/gitignore)</b>	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/.gitignore">https://github.com/vegechick510/DollarBot/blob/main/.gitignore</a>
<b>The file INSTALL.md lists how to install the code</b>	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/INSTALL.md">https://github.com/vegechick510/DollarBot/blob/main/INSTALL.md</a>
<b>The file LICENSE.md lists rules of usage for this repo</b>	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/LICENSE.md">https://github.com/vegechick510/DollarBot/blob/main/LICENSE.md</a>
<b>The file CODE-OF-CONDUCT.md lists rules of behavior for this repo; e.g. see <a href="#">example</a></b>	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/CODE_OF_CONDUCT.md">https://github.com/vegechick510/DollarBot/blob/main/CODE_OF_CONDUCT.md</a>
<b>The file CONTRIBUTING.md lists coding standards and lots of tips on how to extend the system without screwing things up; e.g. see <a href="#">example</a></b>	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/CONTRIBUTING.md">https://github.com/vegechick510/DollarBot/blob/main/CONTRIBUTING.md</a>
<b>The file README.md contains all the following</b>	3	<a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a>
<b>Video</b>	3	<a href="https://www.youtube.com/watch?v=TtzeHElefQ">https://www.youtube.com/watch?v=TtzeHElefQ</a>
<b>DOI badge: exists. To get a Digital Object Identifier, register the project at <a href="#">Zenodo</a>. DOI badges look like this:</b>	3	<p>DOI badge in readme</p> <p><a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a></p>
<b>Badges showing your style checkers</b>	3	<p>Black badge in readme</p> <p><a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a></p>
<b>Badges showing your code formatters.</b>	3	<p>Autopep8 badge in readme</p> <p><a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a></p>
<b>Badges showing your syntax checkers.</b>	3	<p>Pylint badge in readme</p> <p><a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a></p>

<b>Badges showing your code coverage tools</b>	3	Codecov badge in readme <a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a>
<b>Badges showing any other Other automated analysis tools</b>	3	Pytest, issues badges in readme <a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a>
Question No.	Score	Evidence
1.1	Y	<a href="https://github.com/vegechick510/DollarBot/blob/main/README.md">https://github.com/vegechick510/DollarBot/blob/main/README.md</a>
1.2	Y	
1.3	Y	
2.1	Y	
2.2	Y	
3.1	N	
3.2	Y	
3.3	Y	<a href="https://github.com/vegechick510/DollarBot">https://github.com/vegechick510/DollarBot</a>
3.4	Y	
4.1	Y	<a href="https://github.com/vegechick510/DollarBot/blob/main/doc">https://github.com/vegechick510/DollarBot/blob/main/doc</a>
4.2	Y	
4.3	Y	
4.4	Y	
4.5	Y	
4.6	Not applicable	
4.7	Y	
4.8	Y	
5.1	Y	
5.2	Y	
5.3	Y	
5.4	N	
5.5	Y	
5.6	Y	<a href="https://github.com/vegechick510/DollarBot/issues?q=is%3Aissue+is%3Aopen">https://github.com/vegechick510/DollarBot/issues?q=is%3Aissue+is%3Aopen</a>
6.1	Y	
6.2	Y	
7.1	Y	
7.2	Y	



8.1	Y	
9.1	N	
9.2	N	
10.1	Y	
10.2	Y	
10.3	Y	
10.4	Y	
10.5	Y	
11.1	Y	
11.2	Y	
11.3	Y	
11.4	Y	
11.5	N	
11.6	N	
11.7	Y	
11.8	Y	
12.1	Y	
12.2	Y	
12.3	Y	
12.4	Y	
12.5	Y	
13.1	N	
13.2	Y	
13.3	Y	
13.4	Y	
13.5	N	
13.6	N	
13.7	Y	
13.8	Not applicabl e	
14.1	Y	
14.2	Y	
14.3	Y	
14.4	Y	
15.1	Y	
15.2	Y	
15.3	Y	
15.4	Y	
15.5	Y	

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15.6	Y	
15.7	N	
16.1	Y	
16.2	N	
16.3	Y	