

BURT: a chatbot for reporting Android bugs

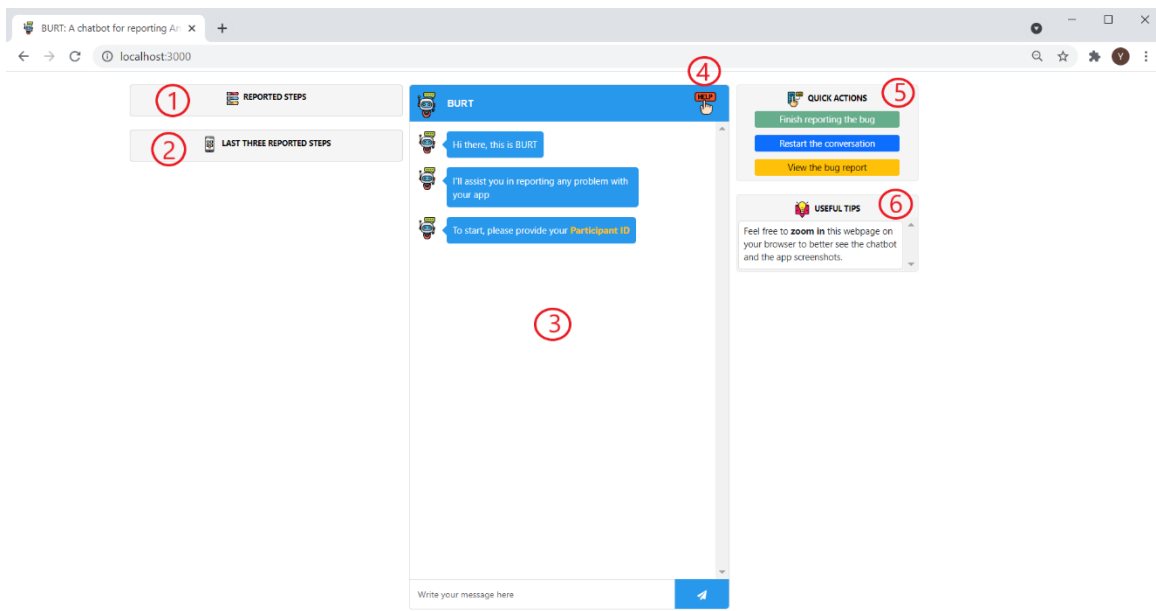
User guide

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BURT's graphical user interface

BURT's main screen is shown in the image below.



BURT's main screen contains:

- (1) The **REPORTED STEPS** panel/display shows the steps to reproduce the bug that you have reported
- (2) The **LAST THREE REPORTED STEPS** panel/display shows the screenshots of the last three reported steps
- (3) **BURT's** chatbot interface
- (4) The **HELP BUTTON** redirects to the BURT's user guide
- (5) The **QUICK ACTIONS** panel/display provides the following options:
 1. **Finish reporting the bug** This button allows you to finish reporting the bug.
 2. **Restart the conversation** This button allows you to restart the dialog with BURT.
 3. **View the bug report** This button allows you to view the bug report you are creating.
- (6) The **USEFUL TIPS** panel/display shows suggestions that will help you better report the bugs with BURT

Bug example

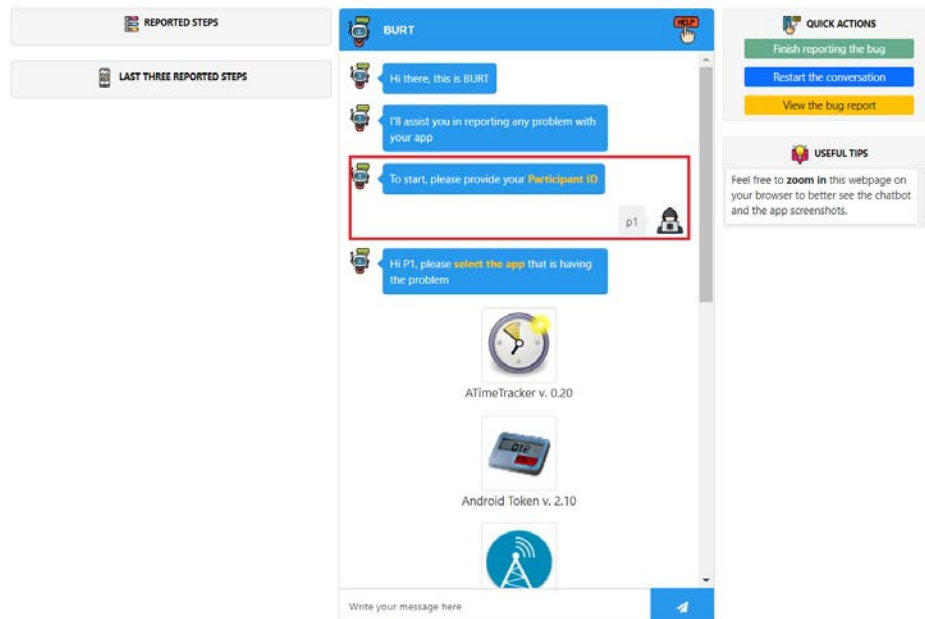
We now illustrate how to use BURT to report bugs. We will show step by step how to report a bug from the [Mileage Android app](#) and show some key recommendations to help you use BURT.

[This video](#) shows the incorrect behavior in Mileage, and [this video](#) shows the expected app behavior.

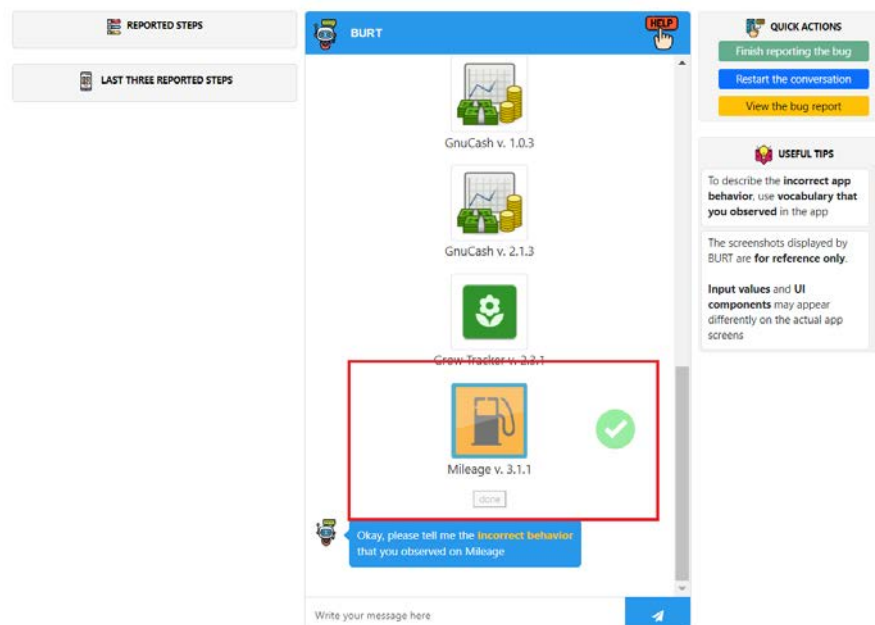
Essentially the bug is that Mileage computes the average fuel economy statistic incorrectly: it shows a NaN value rather than a valid value (e.g., 2.5).

Initiating the bug reporting process

1. To start, type your **participant ID** (e.g., P1)

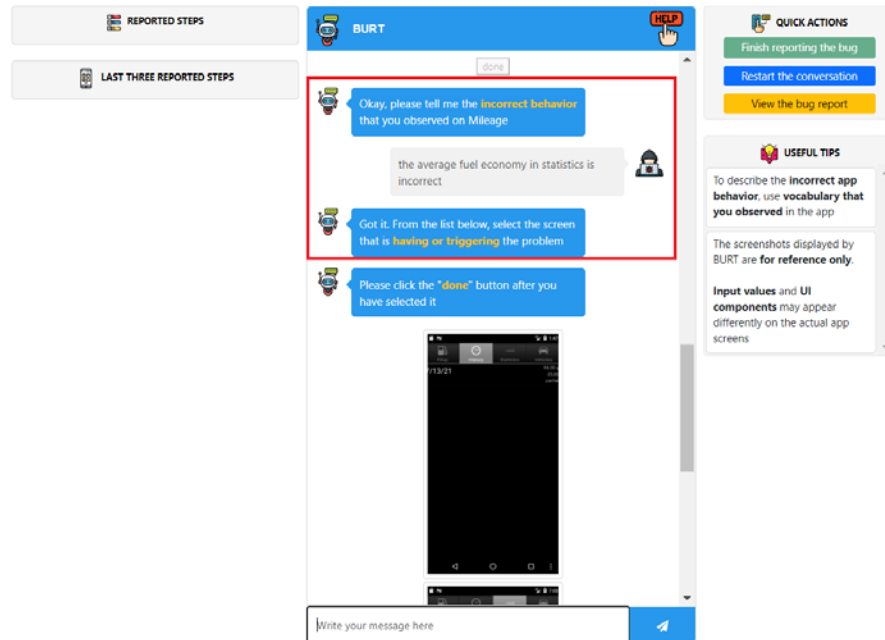


2. **Select the App** with the bug that you will report. After you click the App icon, click “done” button.



Reporting the incorrect app behavior

3. **Report the incorrect app behavior.** Once you type the incorrect app behavior, BURT may provide a list of screens that match your description. Please select the screen that is having or triggering the bug.

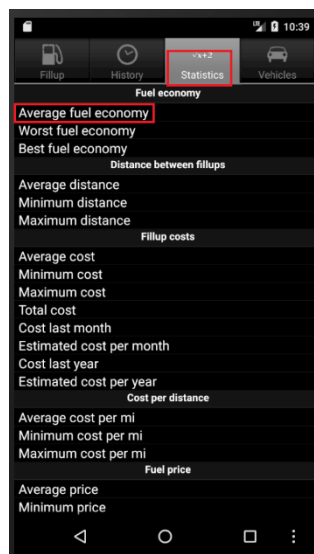


IMPORTANT:

For describing the **incorrect and expected app behavior**, use **words that you observed** in the app. For the bug we are reporting, we can type *"the **average fuel economy** in **statistics** is incorrect"*.

All the screenshots provided by BURT are **for reference only**. For the screens of observed behavior, **the screenshots might not show the bug or error itself** and may display different UI elements or values from what you actually observed in the app.

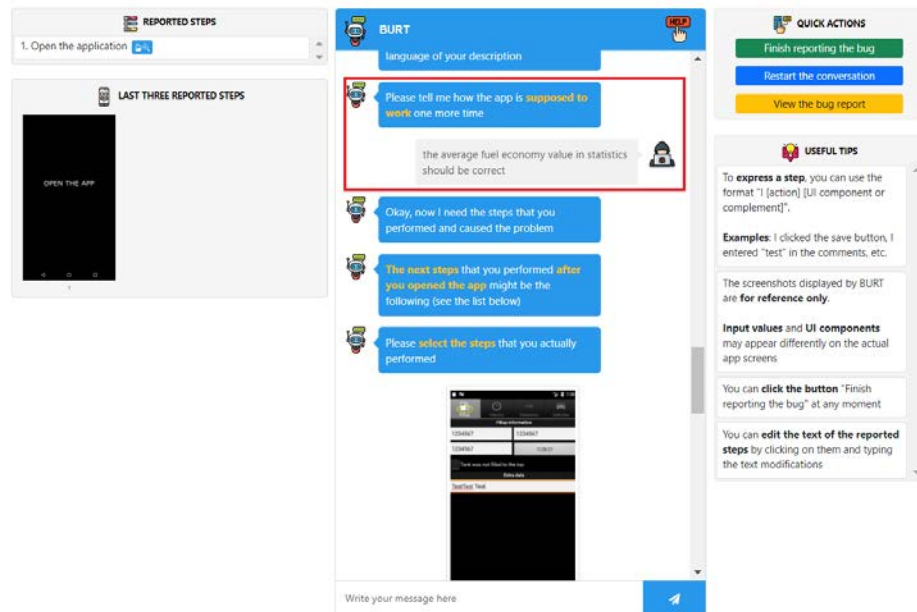
In this case, I selected the below screenshot and then clicked the "done" button. As I said before, this screenshot is just for reference, it will not show the bug or error information directly.



Reporting the expected app behavior

4. **Report how the app is supposed to work.** In this case, we can type *“the average fuel economy value in statistics should be correct”*.

Once again, the recommendation is to **use words that you observed in the app**.



Reporting the steps to reproduce the bug

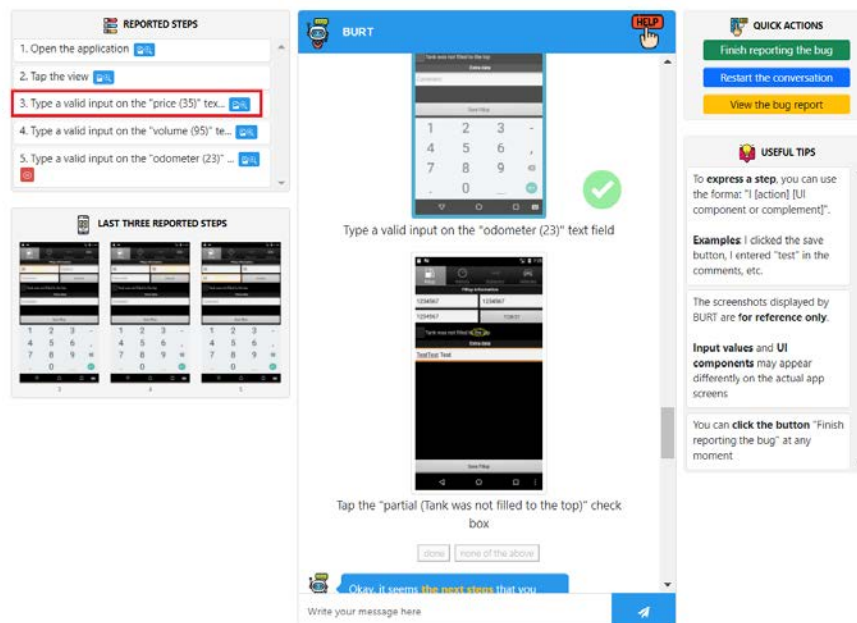
5. **Report the steps to reproduce the bug.** BURT will ask you to provide the steps you performed to replicate/reproduce the bug.

Selecting the suggested steps



- A. BURT will often suggest a list of the next steps you might have performed after reporting a particular step (see the image below).

Please select the steps that you actually performed. Once you select them (and click the “done” button), you will see the selected steps in the REPORTED STEPS panel as seen in the image below.


If the suggested steps do not contain the actual step you performed, you should click the “none of the above” button.



IMPORTANT:

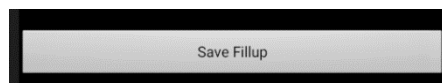
In the **REPORTED STEPS** panel , you can click the blue button  to enlarge the screenshot for a particular step.

You can also edit the step by clicking over the textual description of each step (see the red box in the above image) and modifying the text. For example, you can change the “a valid input” by the actual input value (e.g., “5”) that you entered in this step.

You can also delete the last reported step by click the red button , in case of mistakes or corrections.

Writing steps to reproduce the bug

- B. Sometimes you will need to type a step to reproduce the bug manually. For example, one could type “I clicked the *save fillup* button” using the words from the app button.

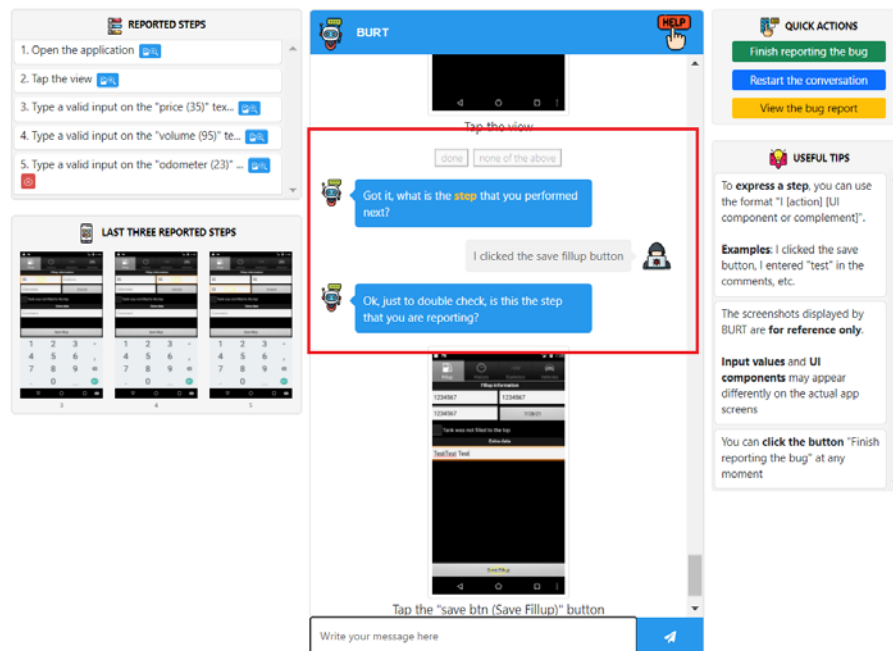


IMPORTANT:

To **express a step**, we commend you to use the format:

"I [action] [UI component or complement]"

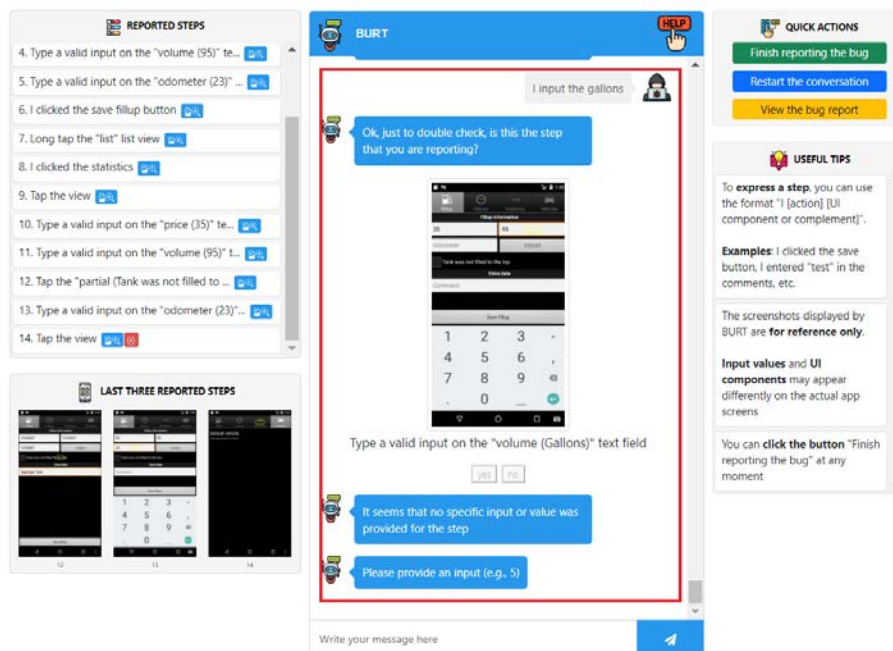
Examples : I clicked the save button, I entered "test" in the comments, etc.



BURT's step processing and feedback

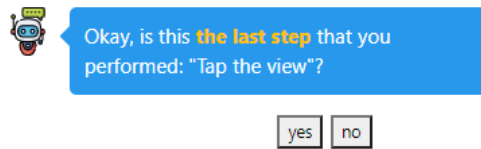
- C. When you type a step manually, BURT **will process the step and give you some feedback if there is any issue with it**. For example, if we type "I input the gallons", BURT will detect that the step lacks the specific input or value, then BURT will ask you to provide it (see the image below).

In other cases, BURT might ask you to **rephrase the step** if the step is not clear.



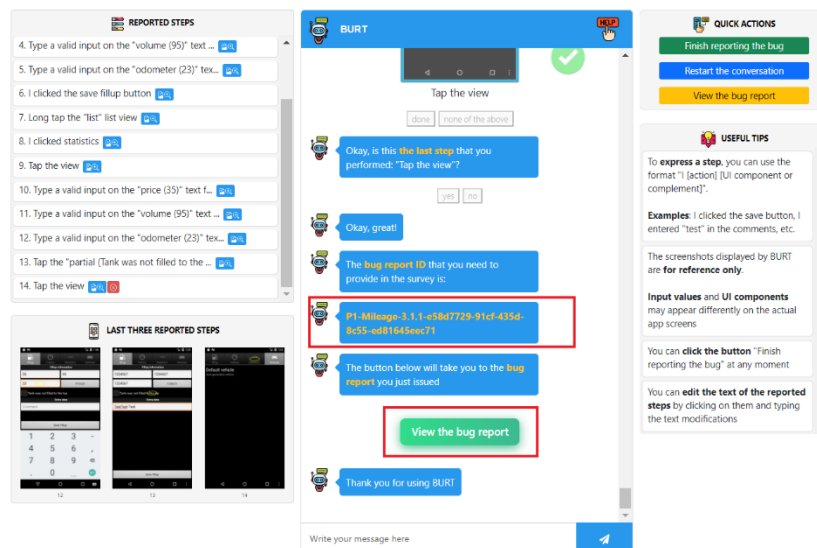
Finishing and restarting the reporting process

6. BURT can ask you if the last provided is **the last step to reproduce the bug**.



If you have finished reporting all the steps without BURT asking you about it, you can click the **Finish reporting the bug** button to finish reporting the bug.

7. **When you finish reporting the bug**, BURT will provide the **bug report ID** and a **link** to the generated bug report. You need to provide this bug report ID in the survey.



8. To start a new conversation, please click **Restart the conversation** to restart a conversation with BURT.