

1) Confused installation instruction

Upon downloading and launching the app, a prompt appeared asking if I had already installed Google Maps. I visited the app store, chose not to download Google Maps, and then returned to the app, only to find no further notification or prompt regarding the necessity of linking Google Maps. This left me unsure about its importance for the app's functionality.

Expectation: If the On Bus Away app requires a connection to Google Maps and users do not have it installed, a pop-up should remind users to download Google Maps and link the two apps. Alternatively, access to On Bus Away should be restricted until this requirement is met.

Solution:

We can write a function `isGoogleMapsInstalled()` to check whether it is installed:

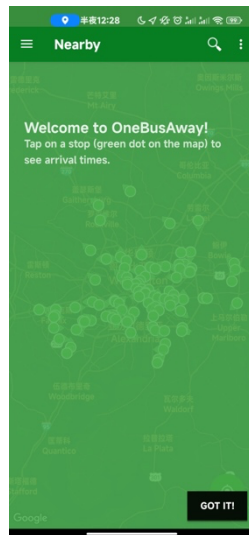
```
private boolean isGoogleMapsInstalled() {
    try {
        ApplicationInfo info = getPackageManager().getApplicationInfo("com.google.android.apps.maps", 0);
        return true;
    } catch (PackageManager.NameNotFoundException e) {
        return false;
    }
}
```

If Google Maps is not installed, you can use an `AlertDialog` to notify the user and provide a button to download it from the Google Play Store.

```
private void showGoogleMapsDownloadDialog() {
    AlertDialog.Builder builder = new AlertDialog.Builder(this);
    builder.setTitle("Download Google Maps");
    builder.setMessage("Google Maps is required for On Bus Away to function properly. Please download and install Google Maps.");
    builder.setPositiveButton("Download", (dialog, which) -> {
        try {
            startActivity(new Intent(Intent.ACTION_VIEW, Uri.parse("market://details?id=com.google.android.apps.maps")));
        } catch (android.content.ActivityNotFoundException anfe) {
            startActivity(new Intent(Intent.ACTION_VIEW, Uri.parse("https://play.google.com/store/apps/details?id=com.google.android.apps.map
        }
    });
    builder.setNegativeButton("Cancel", (dialog, which) -> dialog.dismiss());
    AlertDialog dialog = builder.create();
    dialog.setCancelable(false);
    dialog.show();
}
```

2) Unclear user

When I sought out the tutorial, I encountered no additional instructions beyond the Welcome page, leaving me uncertain about my next steps.



Expectation: I expect the app to provide immediate guidance on its use upon opening, offering a seamless series of tutorials. For instance, following the initial introduction, it should instruct users on how to locate bus stations, bookmark favorite stops and routes, and set reminders. As a functional app, it should not necessitate extensive exploration by the users, which can be time-consuming. Often, users download the app in scenarios such as waiting for a bus or searching for directions, when finding the right bus station and route swiftly is crucial. Therefore, it's imperative that the app quickly teaches users how to navigate its features efficiently.

Solution:

Detect if a user is opening the app for the first time by storing a simple boolean value in SharedPreferences. If it's the first time, launch the Onboarding Activity. For crucial features, consider interactive tutorials where the user must perform the action, such as bookmarking a stop or setting a reminder, to proceed.