1. **Deprecated Methods:**

Methods such as getting spreadsheet id are deprecated in the PropertiesService Class.

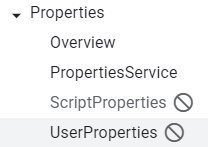


Image is from the app script reference.

1. **Redundancy and Logical flow:**

The code contains too much redundancy of variables logical flow. Somewhere in code it is considering 2nd column for e-mail and in some 5th.

Variables names are too much repeated some are commented etc. such as spreadsheetId and SourceEmail.

1. **Global Const Variables:**

Globalization of the variables as whole is seriously needed.

Make the variable such as SheetID global so that it can be used by every function.

1. **Try- Catch Blocks:**
2. In the functions getRandomHash, createPersonalizedEmails and checkForNewEmails functions, adding appropriate try-catch blocks to log maximum errors.
3. In function browseDriveFiles() check errors for each push to avoid any errors.

Such as

***try {***

***fileData.push([fileId, fileName]);***

***} catch (error) {***

***Logger.log('Error in browseDriveFiles: ' + error);***

***}***

1. **Uncomment:**

if you need createPersonalizedEmails function to add some default values like 'subscribed' and 'unsubscribe\_hash' in case they are missing. Uncomment the code in the function from line 121.

1. **Quota Check:**

Do check the quota of per day mails before executions using getRemainingDailyQuota().

1. **Find SourceUser:**

User find in doGet() function. Instead of using for loop to search for the user's email in the sheet, you can use Array.prototype.findIndex to find the index of the user's email. This will make the code more concise and readable.

1. **Authorization Check:**

For a new user the script might not work so it is better to check if he has authorized Google Apps Scripts.

***var sourceEmail = Session.getActiveUser().getEmail();***

***if (!sourceEmail) {***

***throw new Error('User not authorized.');***

***}***

1. **Substitutes*:***

If anything is missing such as html files add substitutes in the form of functions to the code and call them.