10-Day Google Apps Script Learning Guide

Day 1 – Introduction to Google Apps Script

Goals:

- Understand what Apps Script is.
- Learn where to write and run scripts.
- Write your first script.

Topics:

- What is Apps Script? (JavaScript in Google Workspace)
- Accessing the Script Editor (Extensions → Apps Script in Google Sheets/Docs).
- The Logger.log() function.

Code Example:

```
function helloWorld() {
  Logger.log("Hello, Google Apps Script!");
}
```

Practice:

- Run the function.
- Open **View** → **Logs** to see the message.

Quiz (3 questions):

1. Apps Script is based on which programming language?
    - a) Python
    - b) JavaScript ✅
    - c) Java
2. Where do you open the Apps Script editor in Google Sheets?

    - a) File → Settings
    - b) Extensions → Apps Script ✅
    - c) Tools → Developer
3. What function is used to output logs in Apps Script?
    - a) Console.log
    - b) Print()
    - c) Logger.log ✅

Day 2 – Working with Google Sheets

Goals:

- Learn to open a spreadsheet.
- Access and modify cells.

Topics:

- SpreadsheetApp.getActiveSpreadsheet()
- Reading and writing values.

Code Example:

```
function writeToSheet() {
  const sheet = SpreadsheetApp.getActiveSpreadsheet().getActiveSheet();
  sheet.getRange("A1").setValue("Welcome to Apps Script!");
}
```

Practice:

- Modify the script to write your name into cell **B2**.

Quiz (2 questions):

1. Which method sets a value into a cell?
    - a) setCell
    - b) setValue ✅

    - c) writeValue
2. What object do you use to work with Sheets in Apps Script?
    - a) DocsApp
    - b) SpreadsheetApp ✅
    - c) DriveApp

Day 3 – Reading and Writing Ranges

Goals:

- Read data from multiple cells.
- Write arrays of data back.

Code Example:

```
function readAndWriteRange() {
  const sheet = SpreadsheetApp.getActiveSpreadsheet().getActiveSheet();
  const values = sheet.getRange("A1:A5").getValues();
  Logger.log(values);

  const newValues = [["One"], ["Two"], ["Three"]];
  sheet.getRange("B1:B3").setValues(newValues);
}
```

Practice:

- Read a row of numbers and write them doubled into another column.

Quiz (2 questions):

1. What method returns multiple cell values?
    - a) getValue
    - b) getValues ✅
    - c) readRange
2. To write an array of values, which method is correct?

- a) setValues ✅
- b) setValue
- c) putValues

Day 4 – Loops and Logic in Apps Script

Goals:

- Use loops (for) to process rows.
- Apply conditions (if).

Code Example:

```
function markPassed() {
  const sheet = SpreadsheetApp.getActiveSheet();
  const data = sheet.getRange("A2:A10").getValues();

  for (let i = 0; i < data.length; i++) {
    if (data[i][0] >= 50) {
      sheet.getRange(i+2, 2).setValue("Pass");
    } else {
      sheet.getRange(i+2, 2).setValue("Fail");
    }
  }
}
```

Practice:

- Write a script to label scores above 80 as "Excellent".

Quiz (2 questions):

1. What loop type is commonly used for iterating through rows?
   - a) while
   - b) for ✅

    - c) do-while
2. How do you check if a value is greater than 50?
    - a) value = 50
    - b) value > 50 ✅
    - c) value < 50

Day 5 – Custom Functions

Goals:

- Create custom functions for Sheets.

Code Example:

```
function DOUBLE(number) {
  return number * 2;
}
```

Now use =DOUBLE(5) directly in a Google Sheet.

Practice:

- Create a custom function FULLNAME(first, last) that returns "first last".

Quiz (2 questions):

1. Can Apps Script custom functions be used like normal formulas?
    - a) Yes ✅
    - b) No
2. What keyword is used to return a value?
    - a) yield
    - b) return ✅
    - c) output

Day 6 – Triggers

Goals:

- Understand simple and installable triggers.
- Automate running scripts.

Code Example (onOpen):

```
function onOpen() {
  SpreadsheetApp.getUi()
    .createMenu("Custom Menu")
    .addItem("Say Hello", "helloWorld")
    .addToUi();
}
```

Practice:

- Add a menu item that clears the sheet.

Quiz (2 questions):

1. Which trigger runs when a spreadsheet is opened?
    - a) onOpen ✅
    - b) onEdit
    - c) onLoad
2. Where are installable triggers managed?
    - a) Extensions → Triggers ✅
    - b) File → Settings
    - c) Tools → Developer

Day 7 – Google Docs with Apps Script

Goals:

- Work with DocumentApp.

- Insert text into a document.

Code Example:

```
function writeDoc() {
  const doc = DocumentApp.getActiveDocument();
  doc.getBody().appendParagraph("Hello from Apps Script!");
}
```

Practice:

- Write a script that adds today's date into a document.

Quiz (2 questions):

1. What class is used to work with Google Docs?
    - a) DocsApp
    - b) DocumentApp ✅
    - c) TextApp
2. Which method adds a new paragraph?
    - a) addText
    - b) appendParagraph ✅
    - c) insertLine

Day 8 – Gmail Automation

Goals:

- Send emails with GmailApp.

Code Example:

```
function sendEmail() {
  GmailApp.sendEmail("example@gmail.com", "Test Email", "This is a test sent from Apps Script.");
}
```

Practice:

- Send yourself an email with today's date in the subject.

Quiz (2 questions):

1. Which service sends emails?
    - a) MailApp ✅
    - b) GmailApp ✅
    - c) Both ✅ (both work)
2. What arguments are required for sendEmail?
    - a) To, Subject, Body ✅
    - b) To, CC, BCC
    - c) Subject, Body

Day 9 – Google Drive Automation

Goals:

- Access and create files/folders with DriveApp.

Code Example:

```
function createFolder() {
  const folder = DriveApp.createFolder("My Apps Script Folder");
  Logger.log("Folder created: " + folder.getUrl());
}
```

Practice:

- Write a script to list all file names in your Drive root folder.

Quiz (2 questions):

1. Which class manages Google Drive?
    - a) DriveManager
    - b) DriveApp ✅
    - c) FileApp
2. What method creates a folder?
    - a) makeFolder
    - b) createFolder ✅
    - c) newFolder

Day 10 – Putting It All Together (Mini Project)

Goal:
Build a project combining Sheets, Gmail, and Drive.

Project Example – Email Grade Report

```
function emailGrades() {
  const sheet = SpreadsheetApp.getActiveSpreadsheet().getActiveSheet();
  const data = sheet.getRange("A2:C10").getValues();

  for (let i = 0; i < data.length; i++) {
    const name = data[i][0];
    const email = data[i][1];
    const grade = data[i][2];

    const subject = "Your Grade Report";
    const body = "Hello " + name + ", your grade is: " + grade;

    GmailApp.sendEmail(email, subject, body);
  }
}
```

Practice:

- Extend this to create a PDF report in Drive and attach it to the email.

Quiz (Final Challenge):

1. Which Apps Script services were used in this project?
    - a) SpreadsheetApp ✅
    - b) GmailApp ✅
    - c) DriveApp ✅
2. What loop structure is best for sending multiple emails?
    - a) for ✅
    - b) while
    - c) do-while

👉 By the end of these **10 days**, learners will:

- Understand the Apps Script environment.
- Automate Google Sheets, Docs, Gmail, and Drive.
- Build real-world mini projects.