**Google Apps Script: Backend Simulation - Week 7 Assignment**

**1. What is Google Apps Script? (Explained Simply - Feynman Technique)** Google Apps Script is a computer language made by Google. It is based on JavaScript. You can use it to control Google apps like Sheets, Docs, and Drive. You can write small codes to do work automatically, like send emails or move files. It is like giving Google apps a helper to do things for you.

For example, if you have some grades in Google Sheets, Apps Script can read them, find the total, and send it to your Gmail. It is good for people who are not experts in coding.

**2. The 5Ws of Google Apps Script**

* **Who** uses it?  
  + Students, teachers, office workers, and developers who use Google tools.
* **What** is it used for?  
  + To do tasks automatically, make small apps, change Sheets, send emails, and make forms better.
* **When** is it useful?  
  + When you want to save time by doing tasks automatically, or when you want to add new features to Google apps.
* **Where** is it used?  
  + It works inside Google apps. You can open it at [script.google.com](https://script.google.com/) or from the Extensions menu in Sheets or Docs.
* **Why** should we use it?  
  + Because it is free, easy to use, and works well with Google apps. It is good for simple jobs and small apps.

**3. Creative Uses of Google Apps Script**

1. Send birthday emails from a list in Google Sheets.
2. Make a form that adds data to Google Sheets and Calendar.
3. Build a chatbot that answers from Gmail.
4. Make PDF reports from Google Docs and email them.
5. Track daily habits in Google Sheets and get a weekly report.

**4. AI Conversation (ChatGPT Example)** *User:* How can I use Google Apps Script to find my course grade from a Google Sheet?

*ChatGPT:* You can write a function in Apps Script that reads your Sheet, adds the scores, and finds the percentage. Then, you can show it using a Web App or inside the Sheet.

*User:* Can it update on my website?

*ChatGPT:* Yes, if you use HTML Service or make it a web app, you can show it on your website and it will stay updated.

**5. Pros and Cons of Using Google Apps Script**

| * **Pros** | * **Cons** |
| --- | --- |
| * Easy to learn | * Has limits and rules |
| * Free to use | * Can be slow with big data |
| * Works with Google apps | * Simple design only |
| * Good for automatic tasks | * Hard to fix problems in big code |
| * No install needed | * Needs internet |

**6. Current Course Grade (CCG) Feature** I made a Google Apps Script that connects to my grade Sheet. It adds the scores and max scores. Then, it divides them to find the course grade as a percentage. This grade is shown on my student website using HTML Service.

Apps Script example:

**function calculateGrade() {**

**var sheet = SpreadsheetApp.getActiveSpreadsheet().getSheetByName("Grades");**

**var data = sheet.getDataRange().getValues();**

**var totalScore = 0, totalMax = 0;**

**for (var i = 1; i < data.length; i++) {**

**totalScore += data[i][2];**

**totalMax += data[i][3];**

**}**

**var percent = (totalScore / totalMax) \* 100;**

**return percent.toFixed(2) + "**%";}

**AI link**

<https://chatgpt.com/share/681ad7f3-db8c-8000-95f7-83f85458d347>

<https://chatgpt.com/share/681ad843-e5d0-8000-82d2-6731211856b1>

<https://chatgpt.com/share/681ad862-8ef4-8000-8fbb-b809b41f78a7>

Did the task again from the beginning and this is AI link   
<https://chatgpt.com/share/681aed6c-1840-8000-95f5-49ca9a3af7c0>