

# Using Google Sheets for Individualized Students Assessments

Omar Abdelaziz, Ph.D.

Mechanical Engineering Department

The American University in Cairo

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# Student Assessments in Online Learning

- Issues with Online Student Assessments
  - Using Blackboard test assignments would send out the same test to all students – difficult to control cheating
  - Using Blackboard to send individual emails would be very time consuming
- Grading individualized tests is time consuming
  - Knowing the test version for each student
  - Following the student solution for each student
  - Providing relevant feedback

# Potential Solution

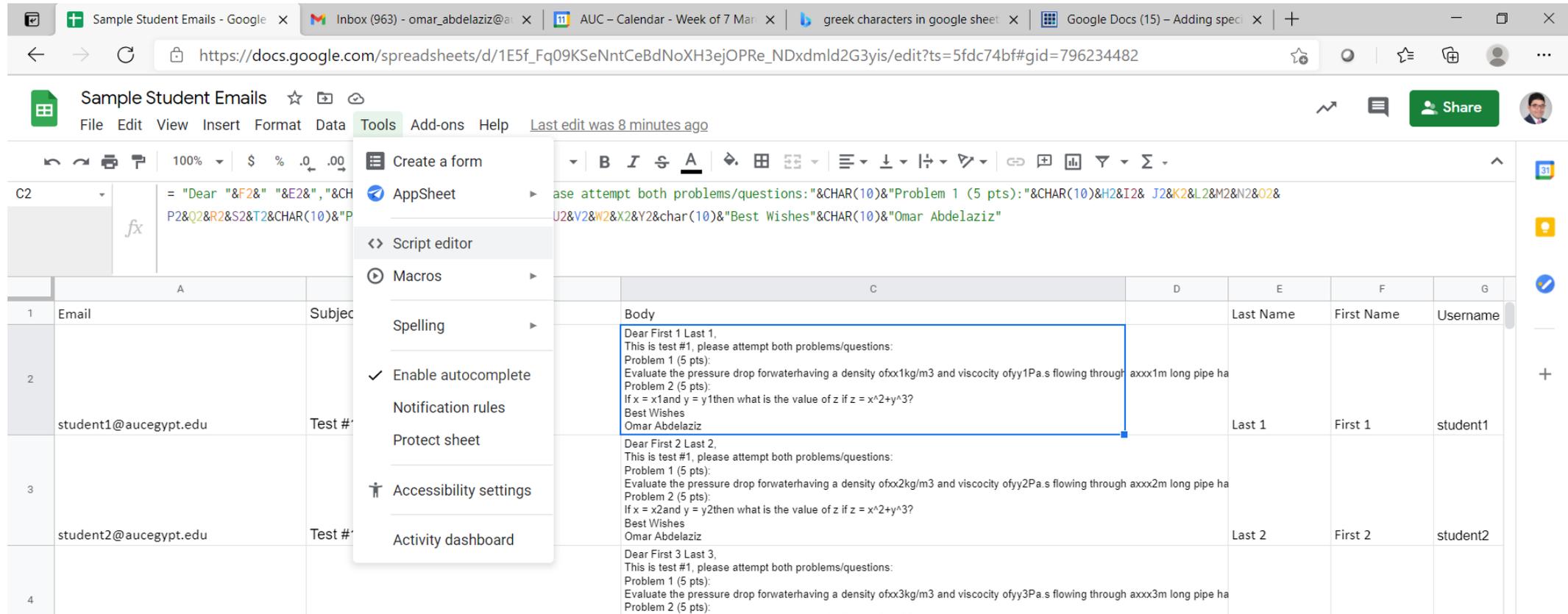
- Using Google Sheets along with the script editor to send out mass individualized emails to the students
- Use Google Sheets to formulate the question/problem
- Clearly layout the problem/question solution steps or reference to solution from available literature/references/textbook
- Formulate an assignment/test on Blackboard so that students may upload their solution as picture/text/etc.
- Grade the test on Blackboard
- Send solution steps to students individually using Google Sheets and the built-in script editor

# Formulating the Test on Google Sheets

- Use the following formula to parse your problem”
- “=“Problem 1:” & Char(10) &“If  $z = x^2 + y^3$ , what is the value of  $z$  if  $x =$ ” & E2 & “ and  $y =$ ” & F2 & “?””
  - E2 is the value of  $x$  – you can have it different for different students
  - F2 is the value of  $y$  – you can easily change it for different students
- Char(10) is used to to move to a new line
- We can add the solution in column G
  - Write in the formula bar “=E2^2+F2^3”

# Script Editor for Individualized Mass emails:

- Click on Tools → script editor → add the script



The screenshot shows a Google Docs interface with a spreadsheet titled "Sample Student Emails". The "Tools" menu is open, highlighting the "Script editor" option. The spreadsheet contains columns for "Email", "Subject", "Body", "Last Name", "First Name", and "Username". The "Body" column contains individualized email content for three students, including a greeting, a test announcement, two problems, and a sign-off.

	A	B	C	D	E	F	G
1	Email	Subject	Body		Last Name	First Name	Username
2	student1@aucegypt.edu	Test #1	Dear First 1 Last 1, This is test #1, please attempt both problems/questions: Problem 1 (5 pts): Evaluate the pressure drop for water having a density of $\rho = 1000 \text{ kg/m}^3$ and viscosity of $\mu = 0.001 \text{ Pa}\cdot\text{s}$ flowing through a $1 \text{ m}$ long pipe having a diameter of $0.02 \text{ m}$ . Problem 2 (5 pts): If $x = x_1$ and $y = y_1$ then what is the value of $z$ if $z = x^2 + y^3$ ? Best Wishes Omar Abdelaziz		Last 1	First 1	student1
3	student2@aucegypt.edu	Test #2	Dear First 2 Last 2, This is test #1, please attempt both problems/questions: Problem 1 (5 pts): Evaluate the pressure drop for water having a density of $\rho = 1000 \text{ kg/m}^3$ and viscosity of $\mu = 0.002 \text{ Pa}\cdot\text{s}$ flowing through a $2 \text{ m}$ long pipe having a diameter of $0.02 \text{ m}$ . Problem 2 (5 pts): If $x = x_2$ and $y = y_2$ then what is the value of $z$ if $z = x^2 + y^3$ ? Best Wishes Omar Abdelaziz		Last 2	First 2	student2
4		Test #3	Dear First 3 Last 3, This is test #1, please attempt both problems/questions: Problem 1 (5 pts): Evaluate the pressure drop for water having a density of $\rho = 1000 \text{ kg/m}^3$ and viscosity of $\mu = 0.003 \text{ Pa}\cdot\text{s}$ flowing through a $3 \text{ m}$ long pipe having a diameter of $0.02 \text{ m}$ . Problem 2 (5 pts): If $x = x_3$ and $y = y_3$ then what is the value of $z$ if $z = x^2 + y^3$ ? Best Wishes Omar Abdelaziz				

# Run the Script

- Modify the number of rows to be processed
- Save the file
- Run the script

Apps Script test

Files +

Code.gs

Libraries +

Services +

Run Debug sendEmails Execution log

```
1  /**
2   * Sends emails with data from the current spreadsheet.
3   */
4  function sendEmails() {
5     var sheet = SpreadsheetApp.getActiveSheet();
6     var startRow = 2; // First row of data to process
7     var numRows = 23; // Number of rows to process
8     // Fetch the range of cells A2:C3
9     var dataRange = sheet.getRange(startRow, 1, numRows, 3);
10    // Fetch values for each row in the Range.
11    var data = dataRange.getValues();
12
13    for (var i in data) {
14       var row = data[i];
15       var emailAddress = row[0]; // First columnS
16       var subject = row[1]; // Second column
17       var message = row[2]; // Third column
18       MailApp.sendEmail(emailAddress, subject, message);
19
20
21    }
22
23 }
```

# Sample File for trial

- Make sure to try with a couple of emails to make sure every thing is working for you!

[https://docs.google.com/spreadsheets/d/1E5f\\_Fq09KSeNntCeBdNoXH3ejOPRe\\_NDxdmld2G3yis/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1E5f_Fq09KSeNntCeBdNoXH3ejOPRe_NDxdmld2G3yis/edit?usp=sharing)