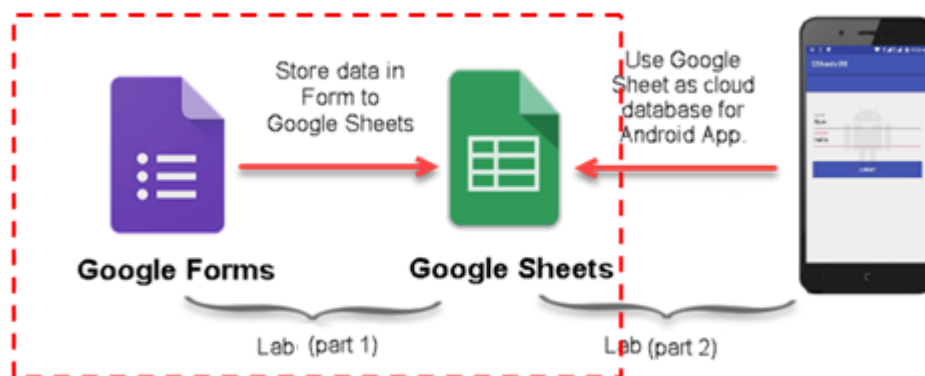


**Lab 3SA01: From Google Sheets and Forms to Mobile Apps (Part 1)**

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**1. Overview**

As shown in Fig. 1, our two parts of laboratory works are aimed at students to a) gain experiences with Google Sheets and Forms on advanced features, and b) know how to extend further them for making mobile applications without heavy programming efforts. Therefore, students will strengthen their problem-solving skills by using Google Forms, and widen their knowledge of creating simple data-driven applications from the G-Suite applications.



**Fig. 1** Overview of issues involved in the laboratory works

**2. Introduction (Part 1): Google Sheets and Forms**

Google Forms are widely known as cloud-based form builder either for business or personal purposes (e.g. survey or quiz activities). It is notable that all responses from users will be stored in a Google Sheet for ease of further processing as well as report. Here, we want you to explore Google Form & its extension for building a solution for each business problem as shown in the following scenarios.

**3. Scenario I**

A teacher at a XYZ school organizes a field trip to Songkla Zoo. It is essential that this trip-information must be notified to parents and permissions will be then collected in return. Previous trips have done by using papers, but proved to be inefficient; Some paper get lost and time is wasted chasing them up last minute. This year, the teacher who is in charge on the trip, therefore, wants to try an electronic system using Google Forms.



(Credit: <https://www.freepik.com>)

### 3.1 Activity Steps

1. Create a new Google Form in Drive.
2. Give the new form a title.
3. Add a simple description with basic event information.
4. Set up form to collect email addresses and response receipts in settings menu.
5. Add following questions:
  - a. 3 short answer questions to collect pupil name, parent name and contact telephone number.
  - b. A multiple choice (yes/no) question to indicate whether parent gives permission.
  - c. Paragraph question asking for any further information – medication, etc.
6. Customize appearance by clicking “[Color Palette](#)” from menu.
7. See how your form will look by clicking “[Preview](#)” from menu.
8. Now your form is ready to share, click “[Send](#)” button.
  - a. Choose how you would like to share it.  
(*Note: the form can be shared from here via email.*)
9. To look at results as they come in, click on responses tab:
  - a. Either view in form edit mode or,
  - b. Click on create spreadsheet button.

### 3.2 Extra mark

- Videos and other media can be used to provide extra info. about the trip.
- Use file upload question (e.g. for signature, passport photo, etc.)
- Create an extra section at the beginning with one question that uses data validation to require entry of a password known only to parents.
- Add some add-ons (e.g. [Form Notifications](#)) to let you know every time a new response is received. Set this up in your Field Trip Form.
- Add another awesome add-on (e.g. [formLimiter](#)) to stop accepting responses after a certain number. Useful if a trip has limited places.

### 3.3 Checklist

- Create a simple field trip permission form (in Thai or English).  
(Note: Make sure that response receipts turned on)
- Have link to spreadsheet of responses accessible to others.

## 4. Scenario II

A teacher at a XYZ school organizes a quiz for evaluating the students' level of understanding in his class. In this regard, this teacher will need to use a feature of [Google Form self-grading quiz](#)<sup>1</sup>, where student will know the scores after their submissions.



(Credit:  
<https://www.dreamstime.com>)

### 4.1 Activity Steps

1. Create a Form
  - Open your Google Drive, and under New select Google Form.
  - Build your online quiz. Remember your first question should be their name and the second should be their teacher/class/period.
    - Use short answers, multiple choice, drop down, time & date questions
2. Create required field(s)
3. Adding questions
4. Complete Your Form / Setting the looks from build-in theme
5. Create your Answer Keys
  - Access your live form (click View live form)
  - For name- use ANSWER KEY in caps (recommended)
  - Complete test; don't forget to click Submit at the end of your test
6. Answer records and calculations.
7. Distributing Your Quiz/Test
  - You can send your quiz through email, or a shared link on your social page.
8. Grading

### 4.2 Extra mark

Access the file “[How\\_to\\_use\\_Google\\_Forms\\_and\\_Sheets\\_to\\_autogen\\_certificate.pdf](#)”<sup>2</sup> in LMS@PSU) and apply it to your case. Here, students (*who pass 50% or above*) will receive a certificate after they complete a quiz. This work requires you to:

- Prepare certificate template
- Install [autoCrat](#) add-on / [or [Certify'em](#)] to Google Sheet for creating PDF or shared Documents from spreadsheet data.



Certify'em

<https://www.certifyem.com/home>

### 4.3 Checklist

- Create a simple quiz (either in Thai or English).
- Have link to the quiz so that it can be accessible to others.
- Have your response sheet to use the autoCrat add-on [or [Certify'em](#)]
- E-mail to issue a certification for student whose score is over 50%.

*Suntorn Witosurapot (update: July 13, 2020) / Seksun Suwanmanee (update: 29-06-2022)  
< Adapted from 240-301 3SA01 for 240-316 update:05-07-2023 >*

<sup>1</sup>Google Forms (self-grading quiz), available at [https://juliannakunstler.com/googleforms\\_quiz.html](https://juliannakunstler.com/googleforms_quiz.html)

<sup>2</sup>[How do I use Google Forms and Sheets to automatically generate custom certificates?](#)