

# Optimizing Google Drive Media For Writing Paperless Office Letter

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**Abstract.** University as an institution is equipped with an administration which always includes archiving activities. Making electronic letters can help administrative activities in obtaining cover letters from campus, one of which is a cover letter from the campus to carry out practical work in companies / institutions. Therefore, making manual letters / archives can be equipped with electronic archiving, one of which is the Google Drive application which has the purpose of being a paperless office. The purpose of this study was to create a cover letter making system using the Google Drive application as a support for a paperless office in universities. In the Google Drive application, other applications will also be used, including google form which is used to display the data entry interface, google docs for document creation and google spreadsheet is used for data storage and processing. This research is a descriptive study with a practical and applicable approach. The subjects in this study were secretariat employees and final year students who carried out practical work. The data collection techniques used were observation, interview and documentation. The impact of making this application is to be able to help students to simplify and speed up in obtaining a cover letter for practical work from campus.

**Keywords :** Google Drive, Paperless office, Mailing application

## 1. Introduction

The advancement of information technology is very influential and provides tremendous benefits for the field of education. As we have seen before, information technology has an important role and greatly affects the ongoing education system. Meeting people's needs for fast, precise, and accurate information is a challenge in itself for an educational institution, both formal and non-formal [1]. One of the activities carried out by students in tertiary institutions is to carry out practical work, practical work is one of the courses that must be followed by every student besides lectures, practicum, and final projects in the context of developing student knowledge. By doing practical work, it is hoped that students can apply and understand technical matters in the fields of electronics, communication, workforce, and informatics in a company / institution / institution. The timing of this practical work is usually carried out during the long holiday at the end of the academic year. Before students carry out practical work, they are required to register in advance to the study program to make a cover letter for

practical work, to be used as an application from the Study Program to companies / agencies so that these students can carry out practical work in their place.

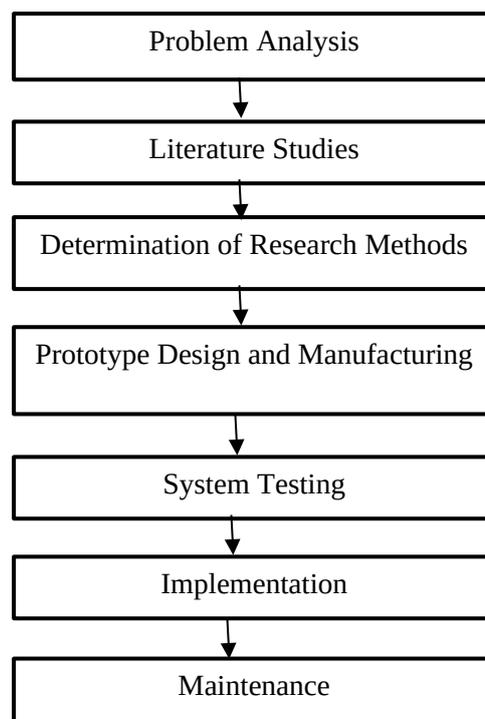
The obstacle that occurs when making this cover letter is that students may take practical work places that are far from where the university is located, usually those whose practical work positions are not far from the student's residence. This results in students having difficulty getting a cover letter for practical work.

The use of Google Drive to optimize office paperclases, especially in the field of higher education, has long been the focus of research. Research related to paparlessness and the use of google drive as well as its relationship to archiving system design include: Mardene Rosalee Carr, who discusses environmental feasibility analysis to be paperless [2], Desi Nur Faizatin and Marya Mujayana who discuss the use of google forms applications in archiving in a college [3] as well as research that has been conducted by Oktavia Setya Ningrum and Durinta Puspasari which discusses the use of the Google Drive application to support paperless office [4].

Based on the explanation above, the purpose of this study is to develop a cover letter making system using the Google Drive application as a support for paperless offices in universities.

## 2. Method

In a process of writing scientific papers, it is necessary to have research methods that are useful to achieve goals and to obtain accurate and reliable information needed by the author to carry out several stages in research. [1] In this study the authors used a descriptive method with a practical and applicable approach. The subjects in this study were secretariat employees and final year students who carried out practical work. The stages of research that will be carried out in developing this letter-making system can be seen in Figure 1 as follows:



**Figure 1.** Research Stage

## 3. Results And Discussion

### 3.1 Problem Analysis

One of the most important tasks in the system development phase is to determine the initial turning point of the problem, the opportunity and the commands that triggered it to create the system. [5], from discussions with students and secretariat courses obtained the results that, often students have returned to their respective places of origin at the beginning of the semester break, even though they have not registered to make a cover letter of practice.

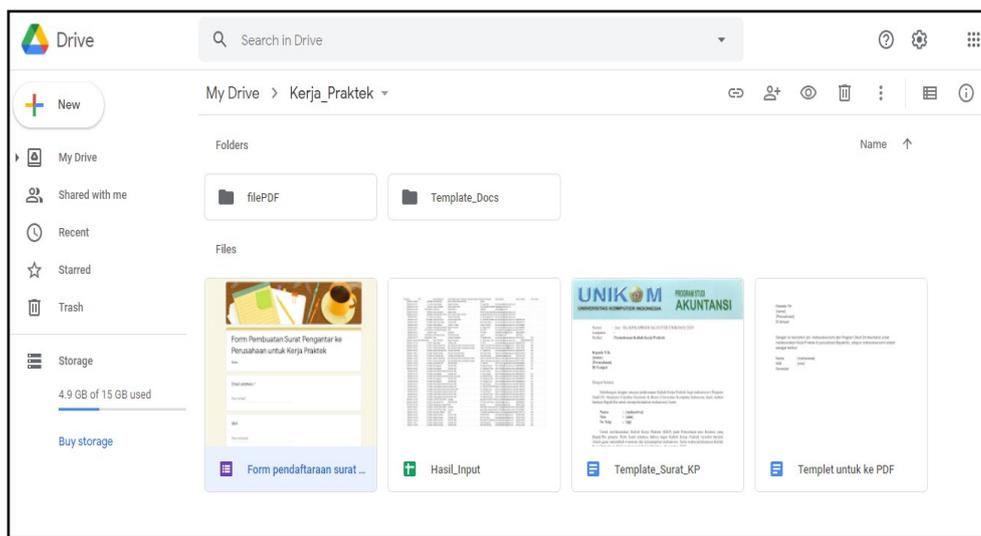
Another obstacle is the frequent use of students to get a practice workplace, not simply asking permission to one place, but rather applying to multiple places as an alternative workplace practice. This results in students having to travel frequently to campus to request a practical cover letter while they are on a long holiday.

### 3.2 Design And Manufacture Of Prototype

Based on the problems that have been obtained, researchers feel the need to develop a system of making introductory letters online, where students can apply for a practical cover letter easily and can at any time, and can get it directly through their own email. For the expected results, it is determined that the application used to create this system is using google drive as well as other supporting applications namely: goole form, google spreadsheets and google docs.

#### 3.2.1. Google Drive

Google Drive app is a data storage application that can be used anywhere and anytime with a computer, laptop or mobile phone connected to the internet network. The google drive app provides 15 GB of free storage and is not only used for storage but is also used for document sharing and makes it easy to edit documents that have been received from others. On this google drive later other supporting applications will be saved, example google drive display made can be seen in Figure 2 as follows:



**Figure 2.** Google Drive Prototype

#### 3.2.2. Google Form

Google Form is an application in the form of a form template or worksheet that can be used independently or together for the purpose of obtaining user information. This application works in the Google Drive cloud storage along with other applications such as Google Sheets, Google Docs, and other add-ons. The Google Form template is very easy to understand and use, and is available in many languages. The only requirement to use it is to have a Google account for form processors or creators [6]. The top view of the google form for making cover letters for companies that have been created can be seen in Figure 3 below.



**Figure 3.** The Top Google Form Prototype

On this google form, students are asked to fill in several questions or input that must be filled in, including email address, student identification number, telephone number, letter number, part name in the intended company and the name of the company. The appearance of the google form that has been created can be seen in Figure 4 as follows.

**Figure 4.** Prototype google form, the question section that must be filled in by students

### 3.2.3. Google Spreadsheet

Google Spreadsheets is an online spreadsheet application that lets you create and format spreadsheets as well as collaborate with other people. Google Drive Spreadsheet, a document processing service application, especially for financial documents or tables that look simple, continues to be developed by Google. As a result, the application is now able to process analytical documents. Google has also changed the name of the application to Google Sheets and has embedded various interesting features in it [7].

In this practical work cover letter making system, the input made by students on the Google Form will be stored on the Google Spreadsheet, the Google Spreadsheet view that has been created can be seen in Figure 5 below.

Timestamp	NIM	Nama Mahasiswa	Nama Bagian pada Perusahaan / Instansi yang akan di	Nama Perusahaan	Email Address	Nomor Telepon	Nomor Surat
7/28/2020 22:27:56	3424123	Angky Febriansyah	Ketua Program Studi	Prodi Akuntansi UNIKON	angky@email.unikom.ac.id		
7/28/2020 22:31:56	41273403031	Inta Budi S	Wakil Rektor III	UNIKOM	rusbudi@gmail.com		
7/28/2020 23:33:33	43256234	Kokom Komariah	Bagian Devan	DPRD Provinsi Jawa Bar	adi.rachmanto@email.unikom.ac.id		
7/28/2020 23:42:14	10504590	Adi Rachmanto, M.Kom	Ketua Jurusan Sistem Informasi	Universitas Komputer Inc	adi.rachmanto@email.unikom.ac.id		
7/28/2020 5:35:01	21119120	Susan Susanti	Pimpinan Personalia	PT. Mita Angkasa Pura	adi.rachmanto@email.unikom.ac.id		
7/28/2020 6:16:47	241346564	Jajang Nurzman	Pimpinan Bagian HRD	PT. BJB Banten Wilayah	adi.rachmanto@0856224941708		
7/28/2020 6:19:51	21327008	Karisma Ayu Nabila	Pimpinan KAP	KAP Azhar Susanto	adi.rachmanto@085634251717		
7/28/2020 6:25:43	21318010	Dhian Maharani	Humas PT.Telkom	Telkom University	adi.rachmanto@081223348000		
7/28/2020 6:32:51	21318001	Aldi Muhammad Bastian	Bagian Personalia	PT. Wijaya Karya	adi.rachmanto@081234560090		
7/28/2020 6:38:11	41273403004	Ony Wallestariningtyas	HRD	Bank BTN	ony.widlestarini@08122333187		
7/28/2020 6:51:27	6262727	Angky	Keuangan	PT Telkom	angkyfebriansyah@085222249923		
7/28/2020 6:35:16	41273403019	Adah Ratna Komala	Prodi D3 Akuntansi	Unikom	adeh.ri@gmail.c	022721245	
7/28/2020 9:57:18	32453464323	Fandi	Pimpinan Perusahaan	PT Bahagia Setahu	adi.rachmanto@02132142432		003
7/28/2020 10:06:20	45678876523423	Kokom Komariah	Bagian Personalia	PT. Angin Sopai - Sopi	adi.rachmanto@	9608923432409	009
7/28/2020 10:17:24	21318015	Jaka Lelana	Pimpinan HRD	PT. MITA	adi.rachmanto@085624941708		016
7/28/2020 10:29:54	21318011	Dhija'an Haninawati	Mgr. Sekretariat Telkom Corporate University	Telkom Corporate Univer	dhiyaanhaninawati@081931133367		008
7/28/2020 10:37:23	21318011	Dhija'an Haninawati	Mgr. Sekretariat Telkom Corporate University	Telkom Corporate Univer	dhiyaanhaninawati@081931133367		008
7/28/2020 10:55:53	10504590	Naufal Khanuddin Vafi	Pimpinan Personalia	PT. Angkasa Pura	adi.rachmanto@085623451708		020
7/28/2020 11:06:21	21318007	Stefanie Graciela	Pimpinan Hits Unikom Radio	Hits Unikom Radio	stefanie.21318007@081284131848		005
7/28/2020 11:09:35	21318009	Nur Sa'latin Arifin	Pimpinan Hits Unikom Radio	Hits Unikom Radio	nursalatin2005@081912011055		007

Figure 5. Prototype Of Data For Submission Of Application For Practical Work

### 3.2.4 AdWords Scripts

AdWords scripts allow you to make automatic changes in your AdWords account. With the JavaScript code, you can change bids, pause ad groups, and add keywords in a written script directly instead of manually in your AdWords account [8].

In this practical work cover letter maker system, to automatically make a .pdf file and directly send the practical work application letter file to the student's email according to what has been inputted, some Adwords scripts are added in the google spreadsheet section. The display of the AdWords Script Prototype that has been worked on can be seen in Figure 6 below.

```

1 function afterFormSubmit(e) {
2   const info = e.namedValues;
3   const pdfFile = createpdf(info);
4   const entryRow = e.range.getRow();
5   const ws = SpreadsheetApp.getActiveSpreadsheet().getSheetByName("People");
6   ws.getRange(entryRow, 9).setValue(pdfFile.getUrl());
7   ws.getRange(entryRow, 10).setValue(pdfFile.getName());
8
9   setEmail(e.namedValues["Email Address"][0], pdfFile);
10 }
11
12
13 function setEmail(email, pdfFile) {
14
15   GmailApp.sendEmail(email, 'Attachment example', 'Surat Pengantar Kerja Praktek', {
16     attachments: [pdfFile],
17     name: 'Surat Pengantar Kerja Praktek'
18   });
19
20 }
21
22
23 function createpdf(info) {
24
25   const pdfFolder = DriveApp.getFolderById("1K5cKS1he093gd2efhgJ0I9NtcpUJwUu");
26   const tempFolder = DriveApp.getFolderById("1Y0batd6IYR4SRtqIpIZJg0MndM4LeR2B");
27   const templateDoc = DriveApp.getFileById("1yw0dEogS20f9FK_DuRfNuasBSWT-L5H5Ta_KDuo3zza");
28

```

Figure 6. The AdWords Script Prototype used

### 3.2.5. Google Docs

Google Docs is an application developed for file server needs, especially office applications. Starting from word processing, spreadsheet processing and presentation. Google Docs can also be used to process (save, create, edit) office application programs online [9].

In this practical work cover letter maker system, google docs is used as a letter template which will later be converted into a pdf file, with student data that matches the input on the google form. The Google docs prototype display that has been designed can be seen in Figure 7 below.

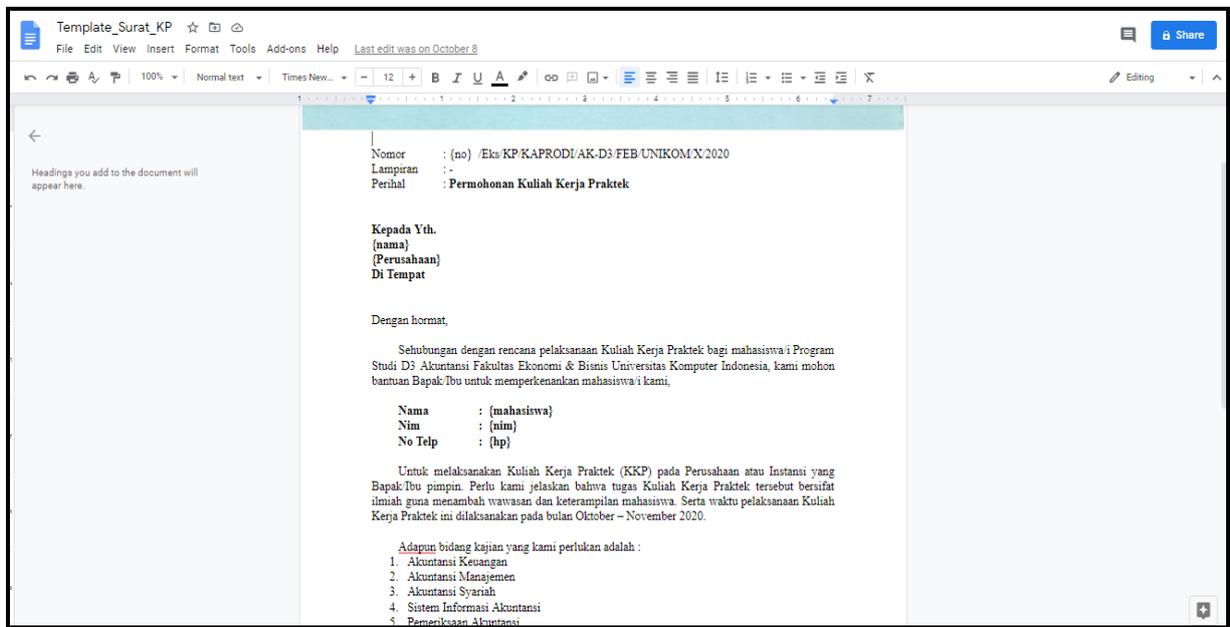


Figure 7. Prototype Google Docs Cover Letter For Practical Work

### 3.3. System Testing

The system testing stage focuses on the internal logic of the software and on the external functional, namely directing testing to find errors and ensuring that the limited input will provide actual results that match the required results [10]. The following is an example of displaying the input results on the google form and then submitting it, it will automatically send a practical work application letter file to the email that has been filled in by the student. Example of a prototype application letter for practical work in pdf form, can be seen in Figure 8 below.



**Figure 8.** Prototype of Job Cover Letter File in .Pdf Form Sent to Email

#### 4. Conclusion

Based on the results of the research that has been done, several points can be concluded, including: the system for making a cover letter for practical work using the Google Drive application coupled with other applications can be used as a support for a paperless office in college. The impact of this application is that it can help students to simplify and accelerate in obtaining a cover letter for practical work from the campus.

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