Smartphone App for Searching Legal Cases for Non-Law Students

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ABSTRACT: Learning law subjects are not meant only for law students. Some courses in universities around the world require students to register for law subjects for them to graduate. The same situation happens in Malaysia. Students from specific courses, for example, Bachelor of Accountancy, Bachelor of Business Administration, Bachelor of Public Administration, and Bachelor of Sports Science, need to register for the required law subjects to complete the course. All students taking up law subjects are expected to know how to read legal cases. These legal cases can be found in the casebook at the library. Students also can use google or lexis to search for cases. However, for the non-law student, this is a new experience for them as the law is considered alien to them. The large volume of cases in the library and on the internet is a problem for these non-law students. They need to be assisted to be able to search for the most relevant legal cases which are related to their subjects. This study aims to develop an application (app), which can assist the students in searching for the most relevant legal cases to their subject at hand. The study used the waterfall methodology, which is one of the popular methods used to develop software. The developed app is called CaseFinder. The challenge faced while developing the app is to design the app so that it is user friendly to non-law students. Hence, the app is designed with only five law areas, mostly related to the non-law students' subjects. In Malaysia, due to the outbreak of COVID-19, the government has announced that all universities must conduct online distance learning (ODL). It is high time for the app to be developed to mitigate the risk of interruptions to daily teaching and learning. By having the app, non-law students will be well guided in their law classes.

Keywords: App, legal cases, non-law students, searching legal cases, smartphone.

I. INTRODUCTION

Commonly, universities worldwide require students to register for law paper as one of the requirements to graduate. In Malaysia, students who enrol in courses such as Bachelor of Business Administration, Bachelor of Public Administration, and Bachelor of Accountancy, to name a few, are required to take up law papers as a requisite for the courses. They have to pass law papers to graduate. These non-law students may have difficulties in legal writing as students are expected to know the relevant law and legal cases that are alien to them. These laws and legal cases are essential in legal writing to solve the issue at hand.

Legal writing requires the students to know the relevant legal cases to support their argument, without which, the discussions will be weak. Legal writing is a hitch to non-law students as they do not know which legal cases to be included to support their arguments. For them, legal writing is a horrifying task in law classes [1]. To improve the writing process, the students must know the relevant cases to their issue at hand. To help non-law students overcome their problem, a study was carried out to develop an app that can guide the students in searching for the relevant legal cases throughout the writing process.

Mobile learning has started in Western countries as early as 2005 [2]. The benefits of mobile learning have been identified by many researchers in the related field [3]. Among the benefits of mobile learning is mobile learning allows for flexibility [4]. Students can study anywhere and at any time. Mobile learning leads to better completion rates and higher retention [5] due to concise and chunk-sized content, making it easier for students to absorb the material. The outbreak of COVID-19 also plays a role in enhancing mobile learning in Malaysia as the government had announced online distance learning (ODL) in all universities would replace face to face lectures [6]. These are solid justifications for universities in Malaysia to adopt mobile learning.

The smartphone was chosen as a tool for writing due to smartphones are very popular among university students. Among students, a smartphone is a popular tool for the source of information [7], able to enhance the students' learning [8, 9], and it is famous for networking [10]. Students use smartphones to support teaching and learning both inside and outside class [11]. Previous researches conducted on legal cases were on retrieval and prediction of legal cases. Research on legal cases retrieval started a long time ago with legal professionals, and researchers began to use an online database with full-text retrieval system [12-14].

However, the system poses a problem to the professionals and researchers as they need to complete the information to accurately assess the subject matter. The data retrieved by the system is prone to uncertainty [15]. Later on, a new type of retrieval system was introduced, which allows the users to retrieve their queries using ordinary language [13]. Researches on the prediction of legal cases also has been conducted whereby these researches predict the judgment or outcome of the current legal case based on judgment or outcome of previous legal cases similar in law [16-19]. The legal cases concerned are stored digitally and need to be retrieved by the users [20].

The above-mentioned researches require users to retrieve information from the large volume of cases on the internet. This process is a problem for non-law students since they are not familiar with the system. They need to be assisted to be able to search for the most relevant legal cases which are related to their subjects. Thus, the development of an app with a database of pertinent legal cases is crucial for the students as the app would be an excellent assistance in finding the relevant legal cases for their legal writing. Hence, this study can fill the existing research gap.

II. MATERIALS AND METHODS

CaseFinder was developed using the waterfall methodology. The methodology is a linear project management approach for developing software. This methodology requires the developer to complete each stage before moving to the next stage [21]. This study developed and published the Android platform app since this operating system is the most popular among the users. Based on the waterfall methodology, the development of CaseFinder consists of five phases, namely, requirements, design, implementation, verification, and maintenance. The development process of CaseFinder is illustrated in Fig. 1.

The first phase of developing CaseFinder is requirements. At this stage, requirements for the application were studied, and ideas relating to the development of CaseFinder were defined. The legal case searching format is also identified at this stage.

The second phase is the design of CaseFinder. At this stage, the function and process of CaseFinder were determined. The purpose of CaseFinder is basically to search for relevant legal cases. The process of CaseFinder requires for legal cases to be stored in a database. The app is designed to retrieve the legal cases from the database based on the user's queries. The app is designed for users who are not familiar with the collection of documents. The retrieval process begins with a set of information requests where each query is a description of information needed [22].

The third phase is the implementation of CaseFinder. The phase involved the development of the app on the IONIC platform. The IONIC framework is a tool used to make a high-quality app with ease. It is an open-source UI toolkit used to build desktop and mobile applications [23]. In this study, the developer used the IONIC platform, which is integrated with the Angular platform. The IONIC platform is used because it is versatile and can be run on android. Moreover, it is simple to use, even for beginners.

The fourth phase is the verification. Verification is a phase to ensure the app meets the users' expectations. The app is then introduced to the students for usage. The developed CaseFinder is tested to ensure that it is well operated.

The last phase is maintenance. Maintenance is essential for the operation of the app. The database, which contains legal cases as well as the technology, will be updated regularly. Maintenance needs to be done periodically to ensure the smooth running of the app.
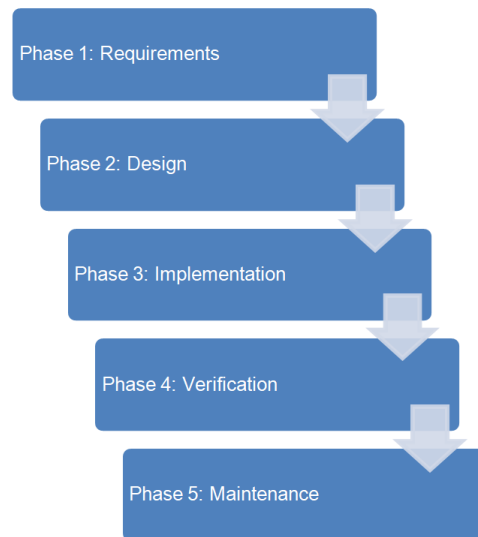

**Fig. 1.** The development of CaseFinder.

III. RESULTS AND DISCUSSION

The process of CaseFinder will contain three parts. Fig. 2 illustrates the process of CaseFinder, which operates on a smartphone. In Part 1, students need to identify the area of law related to their legal problems. There are certain areas of law that are available in the app. The areas are land law, consumer law, employment law, hire purchase, and sale of goods. These areas are stored in the database because these are the most common areas for subjects taken by non-law students. Students must be clear of the area of law related to their issue at hand before they start using the app.

Part 2 requires the students to choose the relevant topic related to their legal problems. For each area of law, topics related will be available for students to choose from. These topics will narrow down the cases, which are the most relevant to the students' needs. Once the topic is selected, a list of cases will be displayed.

Part 3 requires the students to choose the legal case. Once the case is chosen, facts and judgment of the case are displayed. Students can then read out the case over and over again. Finally, in Part 4, the students can download the case and store it in their computer.

Case Finder is designed in such a way that students can save time searching for legal cases manually. It is time to develop a smartphone app because of the benefits of mobile learning. Apart from that, the government's directive also plays a vital role in fuelling the need to move towards mobile learning.
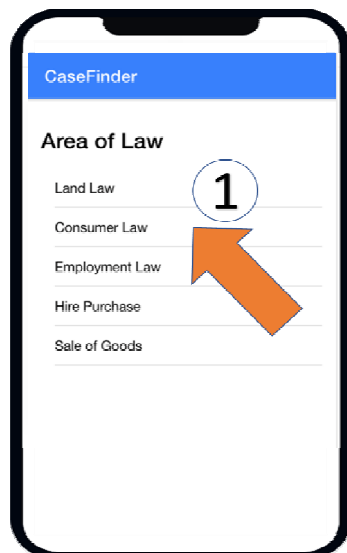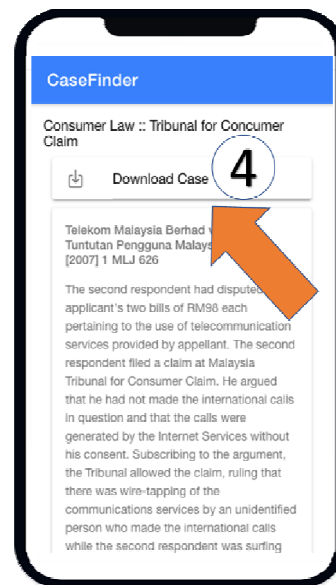
Part 1: Identify the area of law.
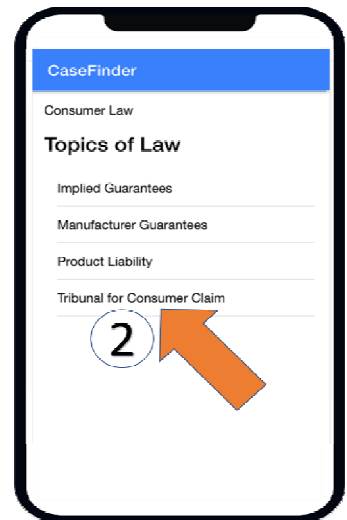
Part 2: Choose the relevant topic.
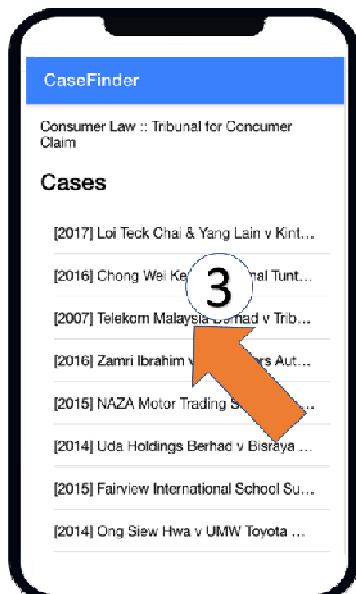
Part 3: Choose the legal case.

Part 4: Download the case.

Fig. 2. Screenshots of the process of CaseFinder.

IV. CONCLUSION

This study intends to help non-law students in search of the most relevant legal cases when discussing a certain legal problem. The problem with these non-law students is that they are not familiar with legal cases and the large volume of legal cases available online and offline is quite confusing for them. To overcome this problem, a smartphone application has been developed which is called CaseFinder. CaseFinder is developed in such a way that students can easily search for the relevant legal cases by searching the database. To search for the legal cases, the students need to key in the correct topic and area of law and. Then the most relevant legal cases will be displayed. CaseFinder is an application which is quite handy. Thus, students can have access to legal cases almost everywhere. This app is more convenient to the students as compared to the traditional method which is library search. This study is an important contribution to the area of teaching and learning law among non-law students as students are guided with the application installed in their smartphones and they can use this tool inside or outside the classroom.

V. FUTURE SCOPE

The present study covers only five areas of law, this factor may be taken into account for future study. An app with more areas of law needs to be developed to establish the wider usage of the app among non-law students.

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