CAIS@LAW: Accounting Information System for Small Law Firms in Malaysia

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ABSTRACT

In Malaysia, as of January 2016, nearly 90% of the legal firms comprise less than five partners (4818 firm out of 5405 firms registered). With small number of partners and lack of knowledge in accounting, it is perceived that a special accounting management system for the law firms would be very useful for the lawyers to operate their accounts and book keeping. At present, there are many software on legal firms account management system, for example, the MyCase's web based legal practice management software and the QuickBooks legal accounting software. However, most of this international formulated software are expensive and might not be suitable to cater to the practice of local small law firms. Computerised Accounting Information System for law firms (CAIS@LAW), is specially developed to assist the small law firms in Malaysia. The report produced by CAIS@LAW is also sufficient for submission to professional bodies.

Keywords: Account management system, law firms, Malaysia

INTRODUCTION

Dyt and Halabi (2007) pointed out that the most obvious and startling distinction between successful and discontinued small businesses is in their approach towards the use of accounting information. Accounting Information System (AIS) is a primary source of information to help firms manage their business (Ismail & Mat Zin,

2009). Good AIS can help evaluate the performance of the firm (Heidari, Moradi, Ghahramanizady, & Heidary, 2012) and help owners grow and develop their firms (Halabi, Barret, & Dyt, 2010). AIS could also inform owners of the consequences of their firm's operations and the effects of their past decision making (Wan Ismail & Ali, 2013). Previous research however had found that not all small firms produce accounting reports and that those who do so meet minimal reporting requirements (Davis, Dunn, & Boswell, 2009).

Developments in IT has changed the way of doing business. Accounting is one of the important business areas facing unprecedented challenges due to the rapid development of IT (Davis, Dunn, & Boswell, 2009). Many researchers agree that aspects of accounting practice have been changed fundamentally by advances in IT, including financial reporting, managerial accounting, auditing and taxation (e.g., Davis, Dunn, & Boswell, 2009; Ismail, 2009; Kharuddin, Asshari, & Nassir, 2010; Kouser, Rana, & Shahzad, 2011; Moorthy, Seetharaman, Gopalan, & San, 2010). In fact, accounting was the first area to be computerized (Davis, 1989). Accounting systems that were previously performed manually could now be performed with the help of computers (Salehi et al., 2010). Nowadays, there are range of off-the-shelves accounting software packages or Computerised Accounting Information System (CAIS), has been produced as cost-effective solutions for SMEs and can be easily used by those not trained accountancy (Halabi et al., 2010).

However, the main challenge for law firms in using the general CAIS is their unique nature of business. In Malaysia, majority of legal firms can be categorized as SMEs and they have specific processed and rules regarding accounting records should be kept and recorded (Abd Ghadas et al., 2015). Moreover, the accounting information that they need also differs from other businesses where legal firms have to handle the Client Account separately from Office Accounts to ensure better accountability of the client monies. Hence the slow adoption of automation accounting in legal firms. This has urged the need for a Turnkey System for law firms. Turnkey System is a system written by vendors who specialize in a particular industry (Romney & Steinbart, 2012). This research proposes an idea to create an accounting turnkey system which is acceptable to attorney and SMEs law firms.

METHODS

CAIS@LAW is developed using Rapid Application Development (RAD) methodology. RAD integrates project management techniques, development techniques, users and tools to build quality application systems in a fixed time frame to deliver business value. It can eliminate time constraint problem in order to develop the system faster. RAD has four main processes and requires less time to complete compare to Waterfall Model approach. In general, RAD is a software development methodology, which involves iterative development and the construction of

prototypes. Prototype is an approach based on creating a demonstrable result as early as possible and refining that result. The refinement is based on feedback from the business, the eventual users of the system. Prototyping requires an open approach to development and it also requires an emphasis on relationship management and change management.

Figures 1 shows RAD process, where the result of each phase, often called an end product or deliverables, flows down into the next phase. This phase is a continuous phase where prototypes are rapidly developed until they fulfil the objectives of system requirements.

The first phase of the RAD is to understand the requirements of the system (analysis and quick design). It requires knowledgeable end-users to determine what the functions of the system should be. The process in this phase includes deciding what programming languages and database to use. PHP scripts and MySQL database are used as a development tool to develop a prototype. PHP is scripting language originally designed for producing dynamic web pages which has evolved to include a command line interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License and widely used. It also includes the interface design (what are the interfaces going to look like) and data design (what data will be required). During this phase, the software's overall structure is defined. It is important understand the requirements of the system before proceeding to developing a prototype.

The second phase is a repetition of prototype development (development, demonstrate, design). It includes creating the physical design of the database and mainly focuses on translation of design into programming codes. A code to connect from programming language to MySQL Database Management System (DBMS) is created.

The third phase is testing the prototype to validate CAIS@LAW business processes. Normally programs are written as a series of individual modules and functionality. CAIS@LAW is tested by looking at the
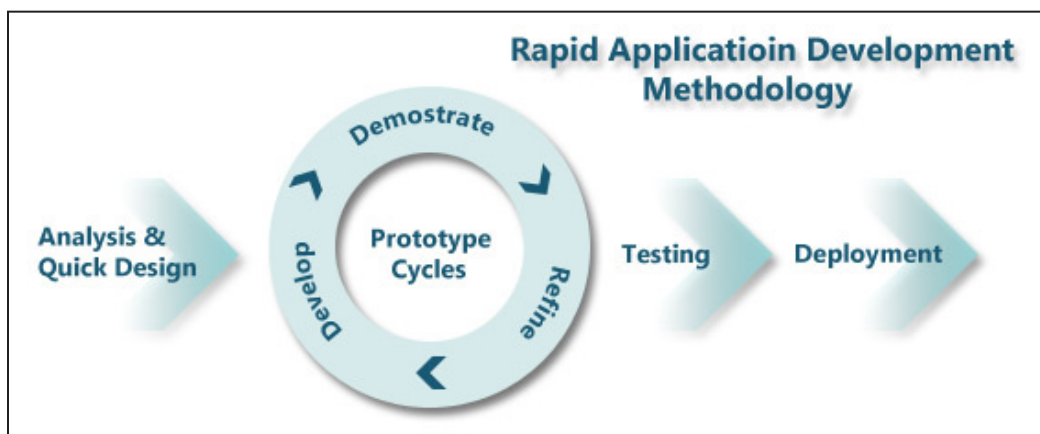

Figure 1. Rapid Application Development (RAD)

functions available in the system. Later, the flow of the system is tested to ensure that interfaces between modules work (integration testing). Next, the analysis report of the system is compiled. The next process involves enhancement and errors correction of the prototype. This process is repeatedly done until the prototypes meet the research objectives. The last phase is deployment in the actual environment when all system functionalities and databases are validated.

CAIS@LAW Architecture

CAIS@LAW is an online web-based system. It can be run using any web browser such as Mozilla Firefox, Chrome or Internet Explore at any operating system platform such as Windows, Mac OS or UNIX.

CAIS@LAW is based on three-tier client-server architecture as shown in Figure 2. The first-tier is the presentation layer. The presentation layer provides the application's user interface (UI). This involves the use of

Graphical User Interface for smart client interaction, and Web based technologies for browser-based interaction. The presentation tier displays information related to bank account, client profile, developer profile, chart of account, client account and office account. It communicates with other tiers by outputting results to the browser/client tier and all other tiers in the network.

The middle layer is the business logic. The business logic tier is pulled out from the presentation tier and, as its own layer; it controls an application's functionality by performing detailed processing. The main function in CAIS@LAW is client account and office account. The client account is cash book/cash account managed by law firm for the client's case transaction. Meanwhile office account is account for law firm operation. The client account is not a part of a legal firm's account but some amount from the client account will contribute to its income.
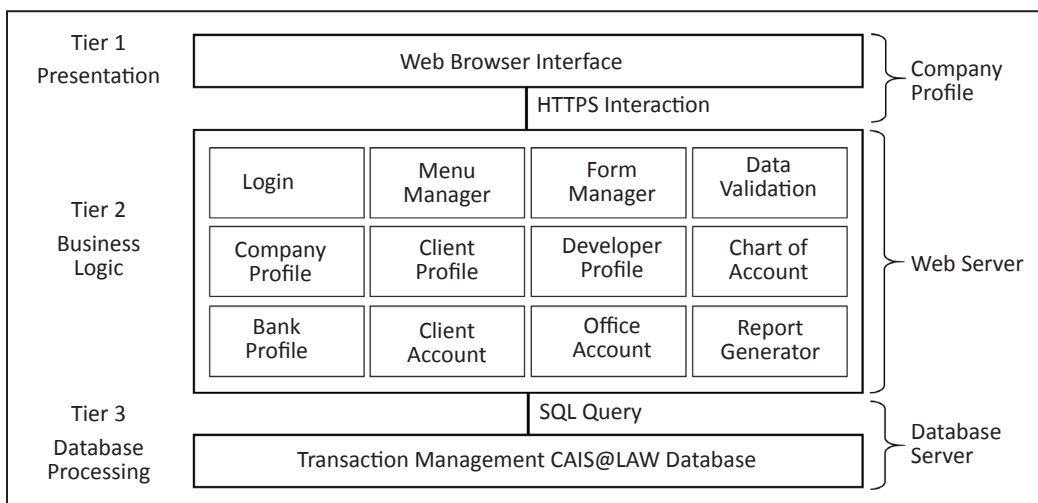

Figure 2. CAIS@LAW architecture and framework

The CAIS@LAW database provides database services in Tier 3 Database processing. The database consists of 11 main tables. There are Account Period, case, client, bank, Client Case, Chart Of Account, Chart Of Sub Account, Client Account Transaction, Developer, Client Contractor Transaction and company Expenses. Figure 3 shows the entity relationship diagram for CAIS@LAW.
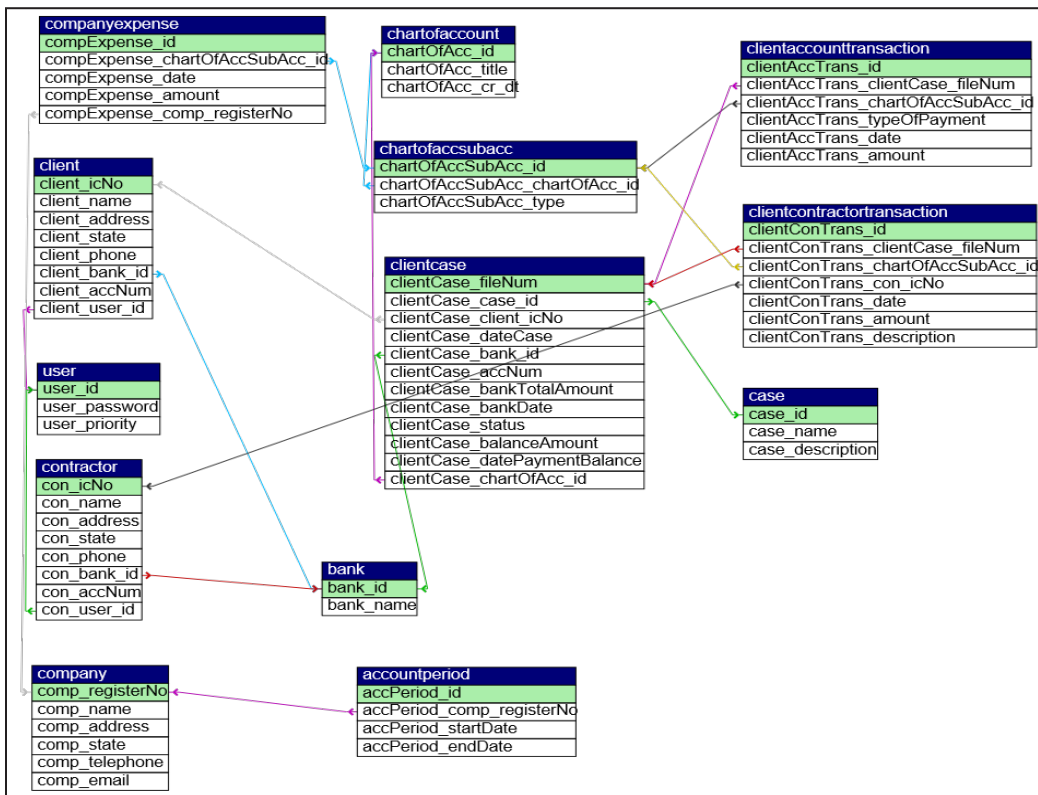

Figure 3. CAIS@LAW entity relationship diagram

CAIS@LAW Implementation

System implementation is the action that must follow any preliminary thinking in order for anything to actually happen. It is the process of getting the system operating properly, including installation, configuration, running, testing and making any necessary changes. Figure 4 and Figure 5 show the login interface and the homepage of CAIS@LAW which sets up the menu of the system, respectively.
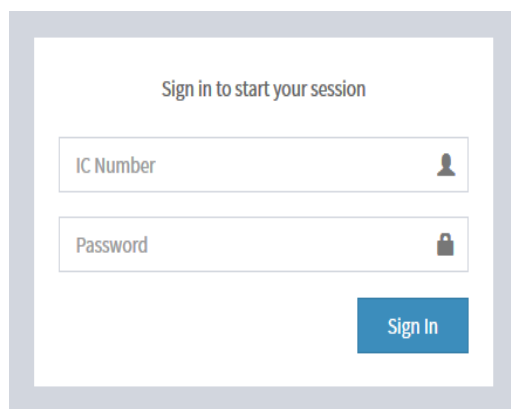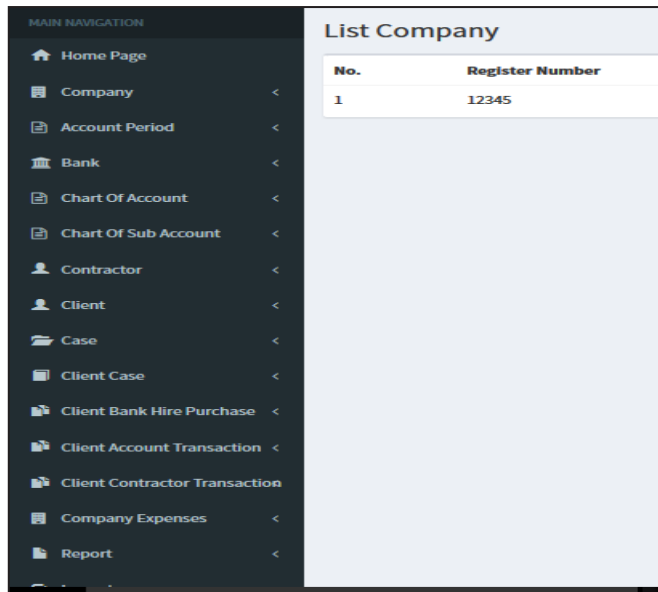

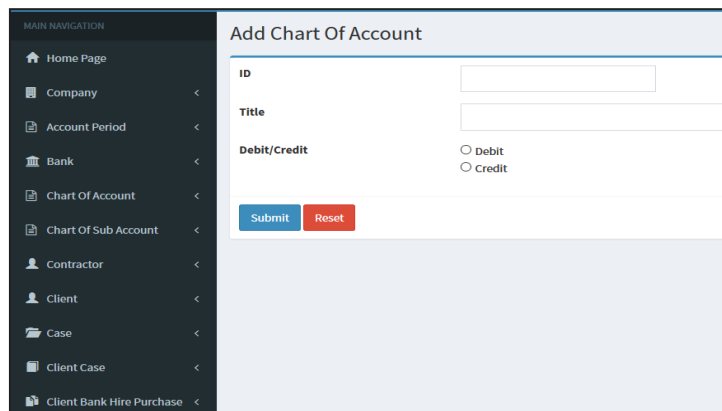*Figure 4.* CAIS@LAW login page

Figure 5. Menu manager

Figure 6. Chart of account

Figure 6 shows the chart of the accounting system where the user needs to set a code for an account name and determine account name status either debit or credit. The account status is important where it will be used in client account.

The Client Account Transaction module is shown in Figure 7. This module consists of two functions. The first function is to add new client account transactions for a particular client based on client file number. The second function is to display all transactions for a particular client file number.

Figure 8 shows the report of client ledger according to respective case of each client. This data is retrieve from table client and client Account.

The Profit and Lost module is the business income for a company, where all

the records of the transactions are displayed based on its accounting period as shown in Figure 9. It shows the list of income from client cases and the expenses. The data was retrieved from office account table and client account table. Some of transactions in the client account are part of the company income.

Figure 7. Client account transactions

Figure 8. Client ledger

Figure 9. Profit and lost

CONCLUSION

CAIS@LAW provides effective ways for owners of small law firms to improve operations and accountability. Business owners can also create a competitive advantage by developing cost allocation processes in their management accounting function. Reports produced by CAIS@LAW also assist small law firms in reporting purposes. As regards to system requirements, CAIS@LAW is able to clout on existing hardware and network resources of the firm to safeguard existing IT investment. The main setback of this system is that it has to be upgraded if the firm's work process changes requiring system upgrade.

As a conclusion, CAIS@LAW is suitable for small law firms in Malaysia to manage their account and to comply with the regulatory body's requirements. It is a software that can be used by lawyers with limited accounting knowledge and designed to cater for transactions in small legal firms.

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