

PENTAQUOTE
(BRINGING NEW USER EXPERIENCE IN FINANCIAL SOLUTIONS)

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A project report submitted in partial fulfillment of
the requirements for the award of the degree of
MSc. (Computer Science - Real Time Software Engineering)

Faculty of Computer Science and Information System
Universiti Teknologi Malaysia

MARCH 2009

ABSTRACT

In the past three decades; human life has witnessed dramatic changes on all levels, but one only emerged as the most dominant; and that was technology. Technology has indeed provided solutions for our daily life needs reducing drastically both time and effort; these solutions were known as real time applications, and many others who operated on the same concept. One of the best known technological creations was the Internet. This report presents a technological innovation that facilitates the Internet as platform for its applications. The new system evolves an insurance model containing five categories. In the context of the extent report, the developer has presented an overview of the technologies and platforms that has been used to develop the project. Moreover; the report presents and evaluate the outcome of the project, backed with evidence of successful implementation. One of the used technologies is WPF; Windows Presentation Foundation is a next-generation presentation system for building Windows client applications with visually stunning user experiences. With WPF, a wide range of both standalone and browser-hosted applications can be created.

ABSTRAK

Tiga dekad yang lepas, kehidupan manusia telah memperlihatkan perubahan dramatik dalam semua aspek, tetapi hanya satu aspek yang paling mendominasi, dan ianya adalah teknologi. Teknologi telah memberikan banyak penyelesaian kepada keperluan harian kita, mengurangkan penggunaan masa dan tenaga secara drastik; penyelesaian ini dikenali sebagai aplikasi “real-time”, dan banyak lagi yang beroperasi dalam konsep yang sama. Salah satu ciptaan teknologi yg termasyhur ialah Internet. Laporan ini memperlihatkan inovasi teknologi yang menggunakan Internet sebagai tapak untuk mengaplikasikannya. Sistem baru ini merubah model insurans sedia ada dan ianya mempunyai lima kategori. Dalam laporan ini juga, pengaturcara telah mengimbas teknologi dan platform yang telah digunakan untuk menghasilkan projek. Laporan ini juga menunjuk dan menilai hasil projek, disokong dengan bukti penggunaan yang berkesan. Satu daripada teknologi yang digunanakan adalah WPF "Windows Presentation Foundation" ia adalah sistem presentasi generasi baru untuk pembinaan "Windows Client application" dengan visual yang agak menarik untuk pengguna. Dengan "WPF" berbagai aplikasi yang terdiri daripada "standalone" dan "Browser-hosted" boleh dibuat.

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CHAPTER 1

PROJECT OVERVIEW

1.1. Introduction

PENTASOFT delivers business solutions using Information, Communication & Entertainment (ICE) Technologies. It focuses on strategic intent of the Customers, their people & processes, to deliver personalized business solutions.

PENTASOFT concentrate on the Financial Services Industry and specialize in: Insurance Software & Services.

Deep domain knowledge and focused approach to the Industry have enabled PENTASOFT to adopt business oriented approach to successfully address the pain points of our Insurance customers. As a result PENTASOFT have earned respect as one of the very first companies who could combine business knowledge as well as technology to develop innovative and effective, user-friendly Insurance Solutions.

PENTASOFT Integrated Insurance Solution (PentaISF) serves as a single solution for all lines of Insurance business; Life, Group Life, Investment Linked, General and Takaful (Islamic Insurance). The proven Insurance solutions have been implemented successfully at several customers' sites, internationally.

1.2. Background of the Problem

One of the purposes for an Insurance Company is to publish their system online, is facilitate remote access capabilities to the customers, thus making it easier to handle from office or even home. Unfortunately; the insurance business is lacking the enough innovation and creativity to create superior user experience to attract customers to the digital world, and as consequence the process of the Online Insurance business is falling behind.

Nowadays; almost all insurance companies has a dedicated online system (Website) to support their customers, and as insurance policies changes, so does these systems. The problem that arises here is how much change is need to be done, and to what level, and this is not an easy task. From a systematic stand point if the online system is divided to more than one component (such as Web Services, Databases, and front-end system), the process of maintenance would be easier to perform because the root of the problem(s) if it appears would be easier to identify.

The implementation of a high degree of User Experience (UX) may vary from one Website to another; depending the complexity of the system as well as its functionality. Hence; any dramatic changes to a system (Website); Webmasters as well as shareholders must perform early on study to the projects validity. In addition deep analysis for the various levels in the system to grasp the gravity of the changes (could be failures or success) that will occur during implementation.

Such system must have a unique design structure in order to be easy to trace down any failure occurred in the system later on.

1.3. Statement of the Problem

A picture of the project's dilemma has been portrait in the Project Background. Hence; the aim of the current project is to develop an insurance system website that features are as follows:

- The site provides visitors with an engaging and memorable experience.
- The visual impact of the site is consistent with the brand identity.
- Graphics, collaterals and multimedia add value to the experience.
- The site delivers on the perceived promise of the brand.
- The site leverages the capabilities of the medium to enhance or extend the brand.
- Users receive timely responses to their queries or submissions.
- Task progress is clearly communicated (e.g., success pages or email updates).
- The Website and applications adhere to common security and privacy standards.
- Online functions are integrated with offline business processes.
- The site contains administration tools that enhance administrator efficiency
- The site prevents errors and helps the user recover from them.
- Overall page weight is optimized for the main target audience.
- The site helps its visitors accomplish common goals and tasks.
- The site adheres to its own consistency and standards.
- The site provides content for users with disabilities.
- Link density provides clarity and easy navigation.
- Content is structured in a way that facilitates the achievement of user goals.
- Content is up-to-date and accurate.
- Content is appropriate to customer needs and business goals.

The insurance system will support the following categories: Fire, Travel, Personal Accident, Motor and Marine Open Cover. In addition; the system supports login feature control on both administrative and user levels.

The project has two user modes, the insurance models mode and the administrator accounts managing mode. The administrator mode connects to the database directly, on the other hand the insurance models mode connects to database through a web service in order to make the system maintenance easier.

1.4. Chapter Summery

The brief description of each chapter in this report is as follows:

- i. Chapter 1: Project Overview
Describe Problem background and statement.
- ii. Chapter 2: Project Objective
Describe project's vision, objectives, scope and deliverables
- iii. Chapter 3: Literature Review
Describe the project's initial study.
- iv. Chapter 4: Requirement analysis and design
Describe the project analysis process and design, uncovering the detailed design of the project that verifies the achievement of the project objectives.
- v. Chapter 5: Implementation and Testing
Describe the implementation process, testing process and testing script.
- vi. Chapter 6: Conclusion
Describe the project outcome, its benefit to the company and future work.

CHAPTER 2

PROJECT OBJECTIVE

2.1. Vision Statement

The upcoming decade will witness the born of a new age, the era of user experience, leaving behind to extinction software with tedious user friendliness. PentaQuote will leap forward with the user and take him to a new level of experience were the best practices and approaches of software engineering is being followed.

2.2. Project objectives

The objectives of the project are as follows:

- i. Manage users' accounts (Create user, Create group, Edit system settings).
- ii. Calculate premium value based on the user information.
- iii. Create quotation reference number for the user.
- iv. Create insurance policy.
- v. Cover five insurance methods (Fire, Personal Accident, Travel, Motor and Marine Open Cover).

2.3. Project scopes

- Analysis, design and implementation for PentaQuote and produce the software engineering documents (SRS and SDD) by using IEEE standards.
- Programming Web Application using WPF (Windows Presentation Foundation) with VB.NET.
- Calling Web service from the (Web Application).
- Process and bind the incoming and outgoing XML data from the web service to be shown to the user.

Theses are the insurance methods:

- 1- Fire – Homeowner / Home Contents
- 2- PA – Individual / Family
- 3- Travel – Individual / Family
- 4- Motor
- 5- MOC (Marine Open Cover)

The system gives option to capture building and content details and attach additional cover other than fire such as earthquake, Terrorism cover.

Under home owner, client can choose cover for building alone or both building and contents.

Steps:

Quick Quotation

→ Accept

→ Detail Quotation

→ Payment Details

→ Submit for Policy

Additional covers are dynamic. It should be dynamically available as per product setup. If the terrorism cover is attached for building under fire product, it should be automated under building.

After entering subject matter value and choosing the peril, upon click the button “Calculate Premium”, system will compute the premium and show the value in the premium column.

If user wants to go for getting the policy online upon confirming the premium, he can click ‘Get Quote’ button. It will take user to enter detail quotation after automating all the values entered in quick quotation to avoid re entering the same in detail quotation.

In the detail quotation, user has to enter all the key information required for issuing policy. Upon click ‘Accept’ button, system will move all the data into intermediate table, system will prompt the message to user that **“Do you want to create policy”**. If yes, payment screen will be displayed. Payment screen will have two options to capture payment method, auto debit thru bank and credit card deduction. Collection will be done separately from finance side. Upon click ‘Submit’ button, system will prompt the alert “Policy created successfully, Policy No: _____” and ‘Print’ button will be enabled. Upon click the ‘Print’ button, user will get the policy schedule via e-mail or printer if connected.

Final Process:

Here, call the following procedure

- Procedure to move data from intermediate tables to actual tables.
- Premium procedure.

6- Marine Open Cover

MOC will be issued from insurance core system. It is a blanket policy. All goods to be declared during shipment will be given here. Rate will be defined in MOC level. Adding shipment option can easily be enabled to corporate client to issue certificate. They don’t have to come to insurance company to issue the certificate. Client can enter their MOC no for authentication and enter all shipment details, after clicking “Submit” button, insert all the values in the intermediate tables and call premium procedure and display the premium, Finally Display (MOC Enquiry Details) the certificate No. and enable print operation

2.4. Project Plan

In the software industry, Project Plan is considered a vital tool to keep the project development in track. Hence; the current project has presented a project plan that illustrates the developments and changes occurred during the implementation. For further details; kindly refer to appendix D.

2.5. Project deliverables

Table 2.1: Project deliverables

Deliverables	Description	Receivers
SRS	Software Requirements Specifications	Academic Mentor (Prof. Dr. Shamsul Sahibuddin) CASE, UTM, Industrial Mentor (Swaminathan Krishnamurthy) PENTASOFT MALAYSIA SDN BHD
SDD	Software Design Descriptions	Academic Mentor (Prof. Dr. Shamsul Sahibuddin) CASE, UTM, Industrial Mentor (Swaminathan Krishnamurthy) PENTASOFT MALAYSIA SDN BHD
	Test Script Document	Academic Mentor (Prof. Dr. Shamsul Sahibuddin) CASE, UTM, Industrial Mentor (Swaminathan

		Krishnamurthy) PENTASOFT MALAYSIA SDN BHD
Technical Report		Academic Mentor (Prof. Dr. Shamsul Sahibuddin) Center for Advanced Software Engineering (CASE) University Teknologi Malaysia
Software (application)	PentaQuote	PENTASOFT MALAYSIA SDN BHD

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