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## CHAPTER 1 INTRODUCTION

A unit trust management company (or mutual fund company) provides their funds closing price in their official website daily in the form of HTML. A unit trust investor is maintaining his own investment with a database located on a third party web server. He closely monitor the prices of the unit trust fund he invested in. In order to obtain the daily closing price of the unit trust fund he invested in, he has to visit the official website of the unit trust management company. When the investor is investing in funds managed by several different unit trust management companies, it will be very frustrating to visit all those companies' website everyday to obtain the latest closing prices.

One of the ways to solve the problem above is using Web Service. Web service is considered as a new generation cross-platform, cross-language distributed computing application. Unit Trust Management Company could implement a Java web service (i.e. a web service application developed using Java programming language) on their web server, and the service uses SOAP protocol. SOAP is an XML-based communication protocol and encoding format for inter-application communication. SOAP is widely viewed as the backbone to web services (Apache Software Foundation, 2005).

The Java web service discloses the closing prices of its funds stored in Unit Trust Management Company database. It lets user to retrieve the required fund prices using a web service client application developed by the investor's choice. The investor

could create web service client applications in any programming (e.g. Java) or scripting language (e.g. PHP) . As long as the web service client can support SOAP protocol, it can be used to retrieve the fund prices from the mutual fund companies that provide web service.

The client application can generate a SOAP REQUEST message and send to the web service provider. The web service will validate the SOAP REQUEST message. If the message is valid, web service will process the request and collect the information required from the server. When the data is collected, the web service application will wrap the data into a SOAP RESPONSE message, and send it back to the client application. After receiving the SOAP RESPONSE message, the client application will validate it. If it is fine, client application will extract the data (such as date and fund prices) from the SOAP message. The fund prices obtained can be updated into the investor's database.

The web service client will be supported with a web user interface. The interface is created using PHP. It will provide the required functions that will allow the investor to properly manage his database. With the use of web service technology, the investor can easily update his database everyday without the trouble of visiting several fund manager websites in order to obtain different fund prices.

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## List of Abbreviations

DTD	Document Type Definition
HTML	Hypertext Markup Language
PHP	PHP Hypertext Processor
REST	Representation State Transfer
SOAP	Simple Object Access Protocol
SHA1	Secure Hash Algorithm 1
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
WSDL	Web Service Description Language
XML	eXtensible Markup Language
XML-RPC	XML-Remote Procedure Call
XSD	XML Schema Definition

## Glossary of terms

### Uniform Resource Identifier (URI)

The Web naming and addressing technology, consisting of strings that identify resources on the Web, such as documents, images, and email addresses

### Uniform Resource Locator (URL)

A subset of URIs referring to Internet addresses. URLs consist of an access protocol specifier, a host IP specifier, and optionally the path to a file or resource residing on that host.

**World Wide Web Consortium (W3C)**

The international body that governs Internet standards. It was created in 1994 and is open to all interested organizations. Participation in the W3C allows member organizations to jointly develop protocols that promote the evolution of the Web while ensuring its interoperability. The W3C holds the specifications for many of the Web technologies such as HTML, XML, and RDF, as well as many Web services standards such as SOAP and WSDL.

**Web service**

A software system designed to support interoperable machine-to-machine interaction over a network. It has an interface described in a format that the machine can process (specifically WSDL). Other systems interact with the Web service in a manner prescribed by its description using SOAP messages, typically conveyed using HTTP with an XML serialization in conjunction with other Web-related standard.

**Web Service Description Language (WSDL)**

A component of a service description that describes the interface definition of the Web service, details related to binding (network protocol and data encoding requirements), and the network location of the Web service.