INTELLIGENT WEB BASED EXPERT SYSTEM FOR RESPIRATORY DISEASE

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ABSTRAK (BAHASA MELAYU)

Kajian ini merangkumi pembangunan prototaip sistem pakar berasaskan web untuk penyakit-penyakit pernafasan yang dinamakan WebResEX. Ia telah dibina di dalam persekitaran web bagi memudahkan proses capaian di kalangan pengguna melalui *World Wide Web* (WWW). Tujuan utama sistem ini adalah untuk mendiagnosis penyakit-penyakit pernafasan pada peringkat awal. Sistem ini mampu untuk mengenalpasti 7 jenis penyakit pernafasan iaitu asma, radang paru-paru (*pneumonia*), penyakit batuk kering (*tuberculosis*), '*chronic bronchitis*', '*occupational lung disease*', barah paru-paru dan serangan jantung. Pengetahuan perubatan akan di simpan di dalam bentuk petua pengeluaran *IF THEN* di bahagian pangkalan pengetahuan. Fakta-fakta bagi masalah-masalah pula akan di simpan di bahagian '*working memory*', manakala bahagian pena'kulan pula di proses di bahagian '*inference engine*'. Tulang belakang sistem ini telah dibangunkan menggunakan Cold Fusion 4.5 dan Javascript. Bahagian antaramuka telah menggunakan Adobe Photoshop dan Swish 2.0 manakala bahagian pangkalan data pula telah dibangunkan menggunakan Microsoft Access 2000.

ABSTRACT (ENGLISH)

This study involves the development of a prototype web based expert system for respiratory diseases: WebResEX. The system was developed in web-based environment that can be accessed globally through the World Wide Web (WWW). The main purpose of this system is to provide early diagnosis of respiratory disease such as asthma, pneumonia, tuberculosis, chronic bronchitis, occupational lung diseases, lung cancer and heart attack. The medical knowledge is store in the knowledge base in the form of production rules (IF/THEN), while the facts of the problem are store in the working memory. The reasoning processes are located in the inference engine. The backbone of the system was implemented using two web based programming language; Cold Fusion 4.5 and JavaScript. The interface has been developed using Swish 2.0 and Adobe Photoshop while the database has been developed using Microsoft Access 2000.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

This chapter discuss about the research and project contexts. This will cover the overview of the study, the problem statement, objective, scope and the significance of the study.

1.1   Overview

Respiratory diseases describe all kinds of diseases that related to our lung and respiratory system. This includes asthma, chronic bronchitis, pneumonia, tuberculosis, chronic obstructive pulmonary disease, bronchus and lung diseases and many others. In Malaysia, respiratory disease is the primary cause of visits to health   clinics   and   outpatient   hospital   clinic (http://www.goldcopd.com/Gold_guidelines/facts1.html).

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