

**DEVELOPING ONLINE HELP DESK FOR POLITEKNIK TUANKU
SULTANAH BAHYIAH**

**A project submitted to Dean of Postgraduate Studies and Research in partial
Fulfillment of the requirement for the degree
Master of Science of Information Technology
Universiti Utara Malaysia**

**By
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ABSTRAK

Satu meja bantuan merupakan bahagian penting dalam banyak organisasi yang menyediakan pengguna dengan satu tumpuan utama di mana pengguna boleh menyalurkan masalah-masalah mereka dan meminta bantuan berkaitan ICT atau peralatan utiliti. Pada masa kini, Politeknik Tuanku Sultanah Bahiyah (PTSB) menggunakan kaedah tradisional untuk sokongan penyenggaraan meja bantuan. Kaedah mengemukakan aduan kerosakan untuk peralatan ICT dan peralatan utiliti adalah dengan menggunakan telefon, bentuk salinan keras atau e-mel. Meja bantuan secara tradisional untuk sokongan penyenggaraan memberi kesan kepada masalah komunikasi terutama antara staf atau jabatan dan ini mengakibatkan penangguhan yang tidak diperlukan dalam menangani aduan kerosakan.

Objektif projek ini adalah membangunkan sistem sokongan penyenggaraan meja bantuan dalam talian untuk meningkatkan kecekapan aliran proses. Kaedah metodologi umum “Vaishnavi” dan “Kuechler” diaplikasikan dalam kajian ini dan sistem prototaip dibangunkan dengan menggunakan metodologi ‘Rapid Application Development’ (RAD). Penilaian keperluan sistem dan manfaat disahkan oleh pengguna sebenar sistem ini iaitu Ketua Unit Penyenggaraan, Ketua Unit Sistem Maklumat, juruteknik Unit Penyenggaraan, juruteknik Unit Sistem Maklumat dan staf Jabatan Matematik dan Sains Komputer. Keputusan ujian telah diperakui oleh pengguna sistem ini dan mereka berpuas hati dengan sistem prototaip meja bantuan dalam talian yang dibangunkan.

ABSTRACT

A help desk is an integral part of many organizations which provides the users with a single focal point where users can channel their problems and ask for help on various ICT or utility equipments. Currently, Politeknik Tuanku Sultanah Bahiyah (PTSB) is adopting the traditional method for help desk maintenance support. The method to raise a defect complaint for ICT and utility equipments is by using telephone, hard copy form or email. Traditional help desk for maintenance support is subjected to communication problems especially between staff or department and this result in unnecessary delay in handling the defect complaint.

The objective of this project is to develop an online help desk maintenance support system to improve the efficiency of the process flow. The “Vaishnavi and Kuechler” general methodology is employed in this study and system prototype is developed using Rapid Application Development (RAD) method. The evaluation of the system requirement and benefit is validated by potential users of the system, in this case are head of department Maintenance Unit, head of Information System Unit, technician from Maintenance Unit, technician from Information System Unit and staff from Department of Mathematics and Computer Science. Test result was acknowledged by the users and they are satisfied with the prototype online help desk system.

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LIST OF ABBREVIATIONS

OS	Operating System
ICT	Information and Communications Technology
PTSB	Politeknik Tuanku Sultanah Bahiyah
UUM	Universiti Utara Malaysia
IT	Information Technology
FAQ	Frequently-Asked Questions
CRM	Customer Relationship Management
OO-SDLC	Object-Oriented Systems Development Life Cycle
UML	Unified Modeling Language
RAD	Rapid Application Development
ACD	Automatic Call Distributor
PDAs	Personal Digital Assistants
SQL	Structured Query Language
PBX	Private Branch eXchange
VOIP	Voice Over Internet Protocol

CHAPTER ONE

INTRODUCTION

Politeknik Tuanku Sultanah Bahiyah (PTSB) is the 16th polytechnic in Malaysia and is located in Kulim High Technology Park. It is fully operational starting 9th June 2003, with its first intake of 507 students. Graduates from PTSB are of good quality, having potential of becoming excellent human resources to various public and private sectors, contributing to the national development. PTSB now has 6 academic departments for teaching and learning process (<http://www.ptsb.edu.my>).

The departments are:

- a) Department of Civil Engineering
- b) Department of Electrical Engineering
- c) Department of Mechanical Engineering
- d) Department of Commerce
- e) Department of Mathematics, and Computer Science
- f) Department of General Studies

Various courses covering the needs of public and private sectors are offered at diploma and certificate levels. In addition, PTSB continues to provide lifelong learning through part-time course which could be pursued by working individuals.

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