

摘 要

由于信息通信技术在近些年来发展飞速且应用越来越广泛，导致网络系统的在全球的影响作用日益增强，而当人们通过互联网进行交换信息时，这个过程需要密码保护，这不单单涉及隐私问题。还涉及国家保密和国家安全。电子邮件不仅简化了工作，而且使生活更轻松。因为是在网上传送，因此可以很大程度地满足现如今许多的通信需求。电子邮件自出现以来，每天都在飞速发展，可谓是日新月异。

本文详细阐述一个基于对称加密算法的电子邮件收发系统，本系统主要表述的是一个基于 C# 语言的邮件系统，具体描述了它的设计原理以及具体的实现过程。在本次设计中使用的开发工具是 Visual Studio 2017，编程运用 C# 语言实现设计。系统可分为三大模块，即邮件发送、邮件接收以及邮件加解密这三个模块。运用白盒测试等方法对系统进行了测试，测试结果也达到了预期目的，实现了发送方和接收方利用邮件安全传送数据的目的。

关键词：电子邮件收发系统；Visual Studio 2017；C#；对称加密算法

Abstract

Due to the rapid development and more and more extensive application of information and communication technology in recent years, the global influence of network system is increasingly enhanced. When people exchange information through the Internet, this process requires password protection, which does not only involve privacy issues. It also involves state secrecy and national security. E-mail not only simplifies work, but also makes life easier. Because it is delivered over the Internet, it can largely meet many of today's communication needs. E-mail has been developing rapidly every day since it came into being.

This paper describes in detail an email system based on symmetric encryption algorithm. This system mainly describes an email system based on C# language, specifically describes its design principle and specific implementation process. The development tool used in this design is Visual Studio 2017, and the programming USES C# language to achieve the design. The system can be divided into three modules, namely, mail sending, mail receiving and mail encryption and decryption. The white box test is used to test the system, and the test results also achieve the expected purpose.

Keywords: E - mail system; Visual Studio 2017; C #; Symmetric encryption algorithm

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