Title of my bachelor thesis is: "security analysis of possible attacks to the electronic city".

In my thesis at first, I talked about parts of an electronic city. For example, electronic hospital, electronic learning, electronic banking and payments and I explained advantages and disadvantages of each one. In this chapter, we can get familiar with basic parts of e-city and what kind of services should provide by every part. For instance, in Electronic Banking I explained E-commerce definition, E-banking definition, E-banking services and etc.

In the next chapter of the thesis, I talked about hacking methods. Hacking methods which target our website. For example SQL injection and XSS. Also, in continue, I explained prevention ways of these kinds of attacks. Next part belongs to the attacks target the programs under the OS like viruses and Trojans. In these two parts, we can read what are viruses and Trojans and they bring what kinds of treats to OS. In the part of thesis about worms, I talked in details about them because in that period I was very interested about the functionality of computer worms and I have my own special researches about a vulnerability in Microsoft Win XP SP2. In this part, I talked about the analysis of a worm and vulnerability in operating systems and programming languages. In action, I mentioned two examples of them.

In the section of attacks that target our networks, I listed all active services and ports and possible attacks to them. So I prepared a list of all kinds of attacks and I inserted a short comment about each one of them. For example, there are DOS, DDOS, TCP/IP Hijacking, Brute force, Ping of Death, Buffer Overflow Exploits, Zero-Day Exploits and etc. explained as attacks to networks or services under the networks.

In the last section, I talked about physical security. I mean I talked about building, locations, architectural features' and crisis that could effect of data center's security.

I have translated my contents of bachelor thesis to English and I insert it below. SO you can check the Contents.

Contents

- Electronic Banking
  What is electronic banking and what is the future challenge in Iran
    E-commerce position
    E-commerce definition
    E-banking definition
    E-banking services
    E-banking branches
    E-banking benefits
  Electronic money or digital money
  Electronic money and its features
  Economic implications of the expansion of the use of electronic money

Hacking Methods

-hacks which target our website

SQL injection

Detection

Ways to cope

Be up to date

Cryptography

Practical examples

Conclusion

XSS

Get familiar with XSS

How XSS happens?

Protect website from XSS

How to protect ourselves from XSS?

-The attacks target the programs under the OS

- Viruses

Preface

History

Detailed categorization on viruses' structure and their activity domain

How viruses spread?

Viruses hidden way and how we know

Prevention of viruses

Reasons to create viruses

Results

-Trojans

Preface

Introduction and confront

Future treats

Conclusion

-Worms

Preface

History of the first worm

How they reproduce

Analysis of a worm

What is the vulnerability?

The most common programming errors that lead to vulnerabilities

History of vulns

Act on a worm in OS

Local and remote

Port scanning

Infection

A sample of real vulnerability in C/C++

A sample of real vulnerability in Win XP SP2

Detection of OS by worm

Conclusion

-The attacks target our network

Role of human factors in the security of computer networks

List of all active services on Windows and Linux ports

Kinds of attacks in computer networks

Preface

Tasks of a server

Vital and needed services

Specifying required protocols

Benefits of disabling unnecessary protocols and services

Attacks

- DOS

Backdoor

- Spoofing
- Man in the middle
- Replay
- TCP/IP Hijacking
- DDOS
- DNS Poisoning
- Social Engineering
- Birthday
- Brute force
- Dictionary
- Software Exploitation
- War Dialing
- SYN flood
- Smurfing
- Sniffing
- Ping of Death
- Port scanning
- Fragmentation Attack
- Buffer Overflow Exploits
- Cgi-bin parameters manipulation
- Manipulation of hidden parameters in forms
- Viewing directories
- Manipulating Cookies/Session
- Hacking by passwords and weak ACL's
- XSS
- Inject orders to server
- SQL Injection
- Gathering sensitive data by failure to control errors