Ethics and Information Technology

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Ethics

- Derived from the Greek word "*ethos*", which means "*custom*", "*habit*", and "*way of living*"

- Definition: "*the discipline and practice of applying value to human behavior, resulting in meaningful conduct.*"

Cont………..

- **Professional Ethics:** *concerns one's conduct of behavior and practice when carrying out professional work, e.g., consulting, researching, teaching and writing.*

- *A computing professional must understand*
  - *Cultural, social, legal, and ethical issues in computing.*
  - *Responsibility and possible consequences of failure.*

Computer Ethics

▶ *Computer ethics defined* *as the application of classical ethical principles to the use of computer technology.*

▶ *Ethical problems related to computers:*

- ▶ *Privacy*
  - ▶ Computers create a false sense of security
  - ▶ People do not realize how vulnerable information stored on computers are
- ▶ *Property*
  - ▶ Physical property
  - ▶ Intellectual property (in both copyright and patent)
  - ▶ Data as property

- *Access*
  - *Access to computing technology*
  - *Access to data*
- *Accuracy*
  - *Accuracy of information stored*
- *Hacking, cracking and virus creation*
- *Software piracy*

The Ten Commandments of computer ethics have been defined by the Computer Ethics Institute.

▶ *1) not use a computer to harm other people.*

▶ *2) not interfere with other people's computer work.*

▶ *3) not snoop around in other people's files.*

▶ *4) not use a computer to steal.*

▶ *5) not use a computer to bear false witness.*

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- 6) not use or copy software for which you have not paid.

- 7) not use other people's computer resources without authorisation.

- 8) not appropriate other people's intellectual output.

- 9) about the social consequences of the program you write.

- 10) use a computer in ways that show consideration and respect.

Computer Virus

What is Computer Virus?

- *Computer viruses are small software programs that are designed to spread from one computer to another and to interfere with computer operation.*

Spreading of Virus

- Virus are most easily spread,
- Spread through E-mail Attachments,
  - Instant Messaging messages,
  - Funny Images,
  - Audio and Videos files,
  - Downloading files from Internet,
  - Greeting cards and many more.

Steps to help avoid Viruses

- ▶ Use an Internet firewall,

- ▶ Subscribe to industry standard antivirus software,

- ▶ Never open an e-mail attachment from someone you don't know,

- ▶ Scan each and every attachment,

- ▶ Rules to be followed, while surfing net

COMPUTER CRIMES

TYPES OF COMPUTER CRIMES

- *TARGET OF THE CRIME*

- *MEDIUM OF THE ATTACK*

- *TOOL*

- *INTIMIDATE OR DECEIVE*

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Types of Computer Criminal

- ▶ *Outsiders*

- ▶ *Insiders*

REASON FOR COMPUTER CRIME

- ECONOMIC

- IDEOLOGICAL

- PSYCHOLOGICAL

- EGOCENTRIC

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METHODS OF ATTACK

- *DATA TEMPERING*

- *Programming Techniques*

- *OTHER METHODS*

Computer Crime can be Defined as

- ▶ IT Infrastructure
- ▶ Illegal access
- ▶ Illegal Interuption
- ▶ Data Interfare
- ▶ System Interfrence
- ▶ Misuse Of Devices
- ▶ Electronic Fraud

Software piracy and Hacking

What is PIRACY???????

❖ *Reselling Media*

❖ *Downloading from a website*

❖ *Taping songs*

❖ *Buying a used book or CD*

• *Watching broadcast television but skipping commercials*

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Types of PIRACY

- End User Piracy

- Client – Server Piracy

- Internet Piracy

- Hard-Disk Piracy

- Software Counterfeiting

End-User Piracy

- This occurs when a company employee reproduces copies of software without authorization

- ❖ Copying disk for installation and distribution
- ❖ Swapping disks in or outside the workplace

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Client-Server Piracy

▶ *This type of piracy occurs when too many employees on a network are using a central copy of a program at the same time.*

❖ *System Overuse*

Internet Piracy

▶ *This occurs when software is downloaded from the Internet The same purchasing rules should apply to online software purchase as for those bought in traditional ways.*

❖ *Pirate website*

❖ *Unauthorized transfer of copyrighted program*

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Hard-Disk Loading

- This occurs when a business who sells new computers loads illegal copies of software onto the hard disks to make the purchase of the machines more attractive.

❖ Value Added Resellers (VAR)

Software Counterfeiting

- *This type of piracy is the illegal duplication and sale of copyrighted material with the intent of directly imitating the copyrighted product.*

HACKER

- *Some one who bypasses the system's access controls by taking advantage of security weaknesses left in the system by developers .*

What HACKER do???????

- SYSTEM

- Access confidential information

- Threaten someone from YOUR computer

- Broadcast your confidential letters or materials .

- Store illegal material

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Evils of Hacking

- *Compromise the security of system without permission from an authorized party, usually with the intent of accessing computers connected to the network.*

Advantage of Hacking

- *To determine problem and weakness for program*

- *Creation of firewall*

- *Useful for military purpose and spying*

- *Better computer security*

Computer crime prevention

Computer crime is becoming ever prevalent in our society. More and more companies and individuals rely on the service and resources provided through networks computers.

TYPES OF COMPUTER CRIME PREVENTION

- ▶ Internet crime prevention
- ▶ Prevention of cyber crime
- ▶ Prevention of computer crime in banking
- ▶ IT security
- ▶ Computer crime prevention law
- ▶ Hi tech crime prevention law
- ▶ Computer crime preventing on line fraud
- ▶ World risk investigation and terrorist prevention

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