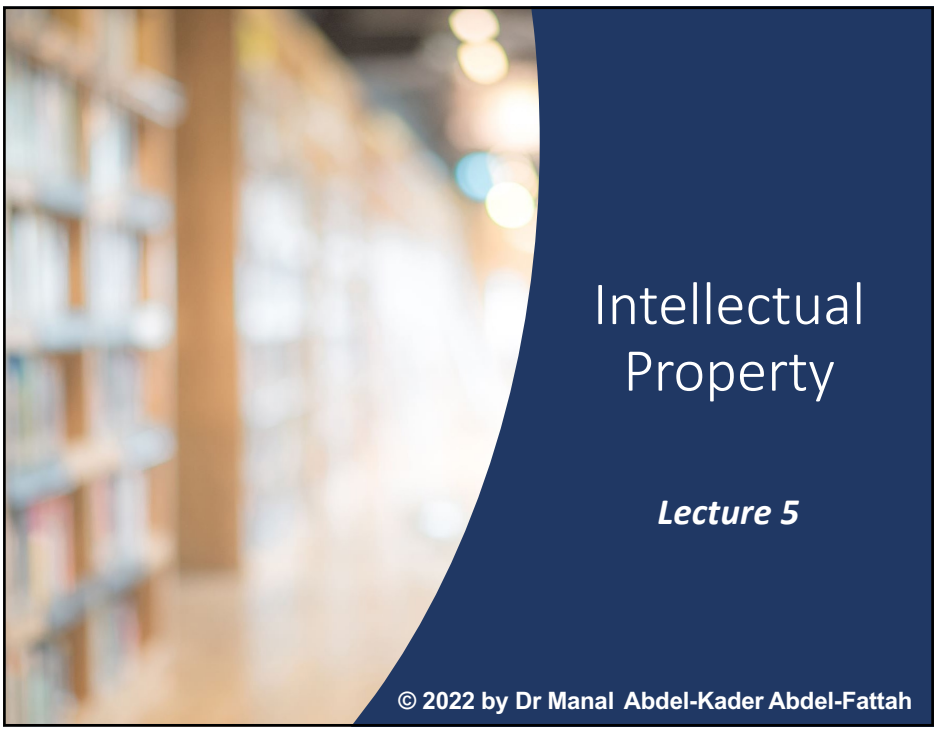

Objectives

1. What does the term *intellectual property* encompass, and why are companies so concerned about protecting it?
2. What are the strengths and limitations of using copyrights, patents, and trade secret laws to protect intellectual property?
3. What is plagiarism, and what can be done to combat it?
4. What is reverse engineering, and what issues are associated with applying it to create a look-alike of a competitor's software program?
5. What is opensource code, and what is the fundamental premise behind its use?
6. What is the essential difference between competitive intelligence and industrial espionage, and how is competitive intelligence gathered?
7. What is cybersquatting, and what strategy should be used to protect an organization from it?

2

1. What is Intellectual Property?

- Term used to describe works of the mind
  - Art, books, films, formulas, inventions, music, and processes.
  - Distinct and "owned" or created by a person or group
- Types of intellectual Property
  - Copyright law
    - Protects authored works (art, books, film, music).
  - Patent laws
    - Protect inventions
  - Trade secret laws
    - Help safeguard information critical to an organization's success

3

Protecting computer software?

- Copyright law
  - Expression of an idea
- Patent law
  - A process to change a computer's internal structure
- In history, software was judged to be a series of mental steps, making it inappropriate for ownership and ineligible for any form of protection.

4

- World Intellectual Property Organization (WIPO)
  - Agency of the United Nations
  - Advocates for the interests of intellectual property owners
- Digital Millennium Copyright Act (DMCA)
  - Added new provisions to WIPO

5

2.1 Copyrights

- Author may grant exclusive right to others
- When new forms of expression develop, they can be awarded copyright protection.
  - Audiovisual works were added and computer programs were assigned to the literary works category in 1976.

6

Copyrights (continued)

- Types of work that can be copyrighted
  - Architecture, Art, Audiovisual works, Drama, Graphics, Literature, Motion pictures, Music, Pictures, Sculptures, Sound recordings
- Work must fall within one of the preceding categories
- Must be original
  - Evaluating originality can cause problems
- An idea cannot be copyrighted, but the expression of an idea can be.

7

Copyrights (continued)

- Copyright infringement: copy a substantial and material part of another's copyrighted work, without permission
- Area of copyright infringement
  - Worldwide sale of counterfeit consumer supplies
- Copyrights to protect computer software exist
  - To prove infringement, copyright holders must show a striking resemblance between the original software and the new software that could be explained only by copying

8

Copyrights (continued)

- Duration of copyright
  - -- Literary, dramatic, Musical and Artistic Works published during lifetime of author: Life + 60 years
  - -- All Other Works: 60 years from date of publication

9

2.2 Patents

- Grant of property rights to inventors
- Issued by the U.S. Patent and Trademark Office (USPTO)
- Permits an owner to exclude the public from making, using, or selling the protected invention
- Allows legal action against violators
- Prevents independent creation (unlike copyright law)
- Applicant must file with the USPTO
  - – USPTO searches prior art
  - – Takes an average of 25 months

10

Patents (continued)

- An invention must pass four tests
  1. Must be in one of the five statutory classes of items: processes, machines, manufactures, compositions of matter (e.g., chemical compounds)
  2. Must be useful
  3. Must be novel
  4. Must not be obvious to a person having ordinary skill in the same field
- Items cannot be patented if they are
  - Abstract ideas (math formulas)
  - Laws of nature
  - Natural phenomena

11

Patents (continued)

- Patent infringement
  - Someone makes unauthorized use of a patent
  - No specified limit to the monetary penalty
- Software patent
  - Claims as all or substantially all of its invention some feature, function, or process embodied in instructions executed on a computer
- 20,000 software-related patents per year have been issued since the early 1980s
- Before obtaining a software patent, do a patent search
- Software Patent Institute is building a database of information.

12

A case study

- Amazon patented its "one-click shopping" system.
- In 1999, Amazon filed a lawsuit against Barnes & Noble for infringing the patent with its "express lane" feature.
- Critics complain that patents are too broad covering unoriginal concepts.
- Amazon and Barnes & Noble settled out of court in 2002.

13

2.3 Trade Secret Laws

- Uniform Trade Secrets Act (UTSA) established uniformity in trade secret law
- Trade secret
  - Business information
  - Represents something of economic value
  - Requires an effort or cost to develop
  - Some degree of uniqueness or novelty
  - Generally unknown to the public
  - Kept confidential
- Computer hardware and software can qualify for trade secret protection

14

Trade Secret Laws (continued)

- Information is only considered a trade secret if the company takes steps to protect it
- Greatest threat to loss of company trade secrets is employees
- Nondisclosure clauses in employee's contract
  - Enforcement can be difficult
  - Confidentiality issues are reviewed at the exit interview

15

Trade Secret Laws (continued)

- Noncompete agreements
  - Protect intellectual property from being used by competitors when key employees leave
  - Require employees not to work for competitors for a period of time
- Safeguards
  - Limit outside access to corporate computers
  - Guard use of remote computers by employees

16

Trade Secret Laws (continued)

- Trade secret law has a few key advantages over patents and copyrights
  - No time limitations
  - No need to file an application
  - Patents can be ruled invalid by courts
  - No filing or application fees
- Law doesn't prevent someone from using the same idea if it is developed independently

17

Legal Overview: The Battle Over Customer Lists

- Employees make unauthorized use of an employer's customer list
  - Customer list not automatically considered a trade secret
  - Educate workers about the confidentiality of such lists

18

Key Intellectual Property Issues

- Issues that apply to intellectual property and information technology
  - Plagiarism
  - Reverse engineering
  - Open source code
  - Competitive intelligence
  - Cybersquatting

19

3. Plagiarism

- Theft and passing off of someone's ideas or words as one's own
- Many students
  - Do not understand what constitutes plagiarism
  - Believe that all electronic content is in the public domain
- Plagiarism detection systems
  - Check submitted material against databases of electronic content

20

4. Reverse Engineering

- Process of taking something apart in order to
  - Understand it
  - Build a copy of it
  - Improve it
- Applied to computer
  - Hardware
  - Software
- Convert a program code to a higher level design
- Convert an application that ran on one vendor's database to run on another's

21

Reverse Engineering (continued)

- Compiler
  - Language translator
  - Converts computer program statements expressed in a source language to machine language
- Courts have ruled in favor of using reverse engineering
  - To enable interoperability, prevent existing manufacturers to monopolize the market.
- Software license agreements forbid reverse engineering

22

5. Open Source Code

- Program source code made available for use or modification
  - As users or other developers see fit
- Basic premise
  - Software improves
  - Can be adapted to meet new needs
  - Bugs rapidly identified and fixed
- High reliability
- www.opensource.com

23

6. Competitive Intelligence

- Gathering of legally obtainable information
  - To help a company gain an advantage over rivals
- Often integrated into a company's strategic plans and decision making
- Not industrial espionage
- Nearly 25 colleges and universities offer courses or programs
- Without proper management safeguards it can cross over to industrial espionage

24

Competitive intelligence (continued)

- Unlike industrial espionage, competitive intelligence uses only published information:
  - Annual report, shareholder filings, quarterly reports, press releases, promotional materials, websites, stock report, credit reports, interviews, customer service, articles in the trade press, patents, environmental impact statements.

25

7. Cybersquatting

- Trademark is anything that enables a consumer to differentiate one company's products from another's
  - May be Logo, Package design, Phrase, Sound, Word
- Trademark law
  - Trademark's owner has the right to prevent others from using the same mark
    - Or confusingly similar mark

26

Cybersquatting (continued)

- Cybersquatters
  - Registered domain names for famous trademarks or company names
  - Hope the trademark's owner would buy the domain name for a large sum of money
- Internet Corporation for Assigned Names and Numbers (ICANN)
  - Current trademark holders are given time to assert their rights in the new top-level domains before registrations are opened to the general public

27

THANK YOU