

# Personal Health and Medical Information

- Our health and medical information is personal
- Some information is very sensitive:
  1. Information about alcoholism
  2. Sexually transmitted disease
  3. Psychiatric treatment
  4. Suicide attempts
- We must strongly desire to keep our health problems private even if they do not have negative connotations.

# Personal Health and Medical Information

- Large medical care providers and hospitals are replacing paper medical records with computer databases
- Computerized records can improve medical care and cut costs
- Studies have shown that when a person is in hospital, approximately 70-80 people may read his or her records. They are
  - o Doctors
  - o Nurses
  - o Lab technicians
  - o Billing clerks
  - o Relatives etc.
- In such an environment it is easy for unauthorized people to know about the diseases of the concerned person.

# Personal Health and Medical Information

- Marketers love medical information
- Metromail, **the mailing-list broker** sold **list of people with specific diseases to the pharmaceutical industries**
- Large drug companies buy other companies that **sell prescription drugs to consumers mainly to gain access to the customer lists.**
- The huge burst in growth of the World Wide Web included medical Web Sites sponsored by a variety of organizations and businesses.
- Patients refill prescriptions and check results of lab tests on the web.

# Personal Health and Medical Information

- Patients correspond with doctors by e-mail
- These are great conveniences that can lower medical costs and improve medical care but they open up new risks and leaks.
- Some of the messages discussed personal medical details and included patients' addresses and telephone numbers.

# Personal Health and Medical Information

- Some economic factors diminish our control over our medical records:
- Most of us do not pay directly for our medical care and we get care from large medical organizations rather than individual, private doctors
- We waive confidentiality of our medical records for insurance payments
- The insurer needs access to the records to verify eligibility and amounts of payments and to check for fraud by patients or doctors
- Preventing and detecting fraud requires access to medical and personal information about patients

# Public Records: Access Vs. Privacy

- The web makes easier for ordinary people to obtain information
- This is one of its major benefits as people can access and retrieve information need for them
- At the same time it exposes some information to the whole world that we might prefer be kept more restricted
- Many government databases contain “public records”, the record that are available to the general public.

# Public Records: Access Vs. Privacy

- For examples:
  - o bankruptcy records
  - o arrest records
  - o marriage-license applications
  - o divorce proceedings
  - o property-ownership records (including mortgage information)
  - o Salaries of government employees and
  - o Wills etc.
- These have long been public, but available on paper in government offices
- These records are used by the lawyers, investigators, real-estate brokers and others
- Some state governments made millions of dollars selling personal information about drivers from motor-vehicle-department records.

# Public Records: Access Vs. Privacy

- How should access to sensitive public information be controlled?
- Technologies for digital signatures are gaining increased use for e-commerce, but are not yet widespread enough for use by everyone accessing sensitive public data on the web.
- They might be routinely used in the future, but that raises another issues:
- How will we distinguish data that requires identification and a signature for access from data the public should be free to view anonymously to protect the viewers privacy?



# Protecting Privacy: Education, Technology, and Markets

- Awareness:
  - The first step in protecting privacy from the risks of computer technology is awareness of:
    - o How the technology works
    - o How it is being used
    - o What the risks are
    - o What tools are available to reduce exposure and
    - o Unwanted use of personal data
  - Since the mid 1990s television programs, newspapers, magazines, pro-privacy web sites and many organizations have informed the public about risks to privacy from marketing and government databases and the WWW