## Network Security

###### Security Attacks

Attacks on the security of a computer system or network are best characterized by viewing the function of the computer system as providing information.

There are four general categories of attack:

* **Interruption:** An asset of the system is destroyed or becomes unavailable or unusable. This is an attack on availability. Examples include destruction of a piece of hardware, such as a hard disk, the cutting of a communication line, or the disabling of the file management system.
* **Interception:** An unauthorized party gains access to an asset. This is an attack on confidentiality. The unauthorized party could be a person, a program, or a computer. Examples include wiretapping to capture data in a network, and the illicit copying of files or programs.
* **Modification:** An unauthorized party not only gains access to but tampers with an asset. This is an attack or integrity. Examples include changing values in a data file, altering a program so that it performs differently, and modifying the content of messages being transmitted in a network.
* **Fabrication:** An unauthorized party inserts counterfeit objects into the system. This is an attack on authenticity. Examples include the insertion of spurious messages in a network or the addition of records to a file.

**IMAP:** The Internet Mail Access Protocol (IMAP), is defined in RFC 2060.It has many features than POP3 , but it is also significantly maore complex. It was designed to help the user whi uses multiple computers, perhaps a workstation in the office, a PC at a home and laptop on the road.The basic idea behind IMAP is for the e-mail server to maintain a central reposition that can be accessed from any machine.Thus unlike POP3 , IMAP does not copy email to the user’s personal machine because the user may have several.

The IMAP has many features.

1. It has commands that permit a user agents to obtain components of messages. This feature is useful when there is a low bandwidth connection between the user agent and mail server.
2. An IMAP session consists of a client command, server data and a server completion result response.

The IMAP server has four states.

* 1. **Non Authenticated State:** Initial state whenthe connection begins, the user must supply a user name and password before most commands will be permitted.
  2. **Authenticated State:** The user must select a folder before sending commands that affect messages.
  3. **Selected State:** The user can issue commands that affect messages.
  4. **Log Out State:** Here the session is terminated.