Seminar session 4: Principles of Digital Forensics and Cyber Law – Cyber Harm

Discussion Includes:

- Cyber crime in Banking Sector
- Effect of Cyber crimes
- Reason for Cyber Crime
  - ➔ Easy access to data
  - ➔ User's Negligence
  - ➔ Lack of internal control
- Types of Cybercrime related with banking sector
  - ➔ Hacking
  - ➔ Key logging
  - ➔ Viruses
  - ➔ Spyware
  - ➔ ATM skimming
- Impact of Cybercrime on Banks
  - ➔ Case study

Cybercrime in banking sector:

- Banking sector is considered as a backbone in country's economy
- Use of cash, cheques, ATM in dialy business
- System paved the way of new payment system based on debit or credit cards
- Banking sector has expended its services to provided better customer services (online banking)
- Cybercrime becomes problem for these innovation
- Cybercriminal can easily get access data using internet

- Digital misconduct in banking sector:

  - ➔ Unauthorized access in money transfer and withdrawals
  - ➔ Breaking websites and gain access to customer information
  - ➔ Causing chaos in accounts and theft of money from customer's account
  - ➔ ATM login details/credential theft
  - ➔ Spamming through email
  - ➔ Cloning of website

Effects of Cybercrimes:

- Long-term consequences on those who are attacked
- Attacker carry out threats such as taking out loans, incurring credits, hacking
- Impact on banking business
- Effects include:
  - ➔ Financial loss
  - ➔ Infringement of confidential information
  - ➔ Legal consequences
  - ➔ Sabotage and theft to identifiable information
  - ➔ Exposed to reputation risks
  - ➔ Operational risks

Reasons for Cybercrimes:

- 1 – Easy access to data:
  - ➔ Attacker gain access to computer system
  - ➔ May have access to personal data including private financial documents of customers
  - ➔ Attacker can copy or transfer into removable devices
  - ➔ As working of banks, government agencies, individual and corporation is based on information technology, insecure storing of confidential data and information processed on their computer is serious danger.

- 2 - User's Negligence:
  - ➔ User of computer should remain very careful and cautious to safeguard their confidential data an information.
  - ➔ Use of password and personal identification number (PIN) to limit the access.
  - ➔ Any negligence on user's side will help cybercriminal to gain access of certain devices and records.

- 3 – Lack of internal control in organization
  - ➔ Many operational systems are used in banks
  - ➔ Must place strong internal control and IT audit systems
  - ➔ Otherwise, it can result in cmoputerized environment failure
  - ➔ Banks software or hardware may become inefficient.

Types of Cybercrime:

- Hacking

➔ It involves a person gaining illegal access to a system
➔ Or attempting to find a way to bypass security mechanism by hacking customer's account or banking website
➔ Hacker can be prosecuted under section 379 and 406[8] and also u/s 43(a) section 66 of the information technology Act, 2008[9]
➔ If the crime of hacking prove the convicted may be sentenced to three years in prison

- Key logging
  ➔ It is known as keystroke logging or keyboard capturing
  ➔ It is process of secretly recording the key press on a keyboard
  ➔ To identify person activity
  ➔ Extremely harmful for stealing confidential information such as banking details

- Viruses
  ➔ It is self replicating program
  ➔ Contains infected executable code or documents
  ➔ Attack the customer computer by inserting infected copies
  ➔ With cause the file to behave abnormally after infection

- Spyware
  ➔ It is most common approach of stealing online banking credential and using them for fraudulent purposes
  ➔ Collecting and transmitting information between computer and websites
  ➔ Install in bogus 'pop up' advertisements to have software downloaded

- ATM skimming
  ➔ Installing a skimming device at the machine keypad
  ➔ That looks like a real keypad
  ➔ Or install a card reader that appear as a part of the machine to compromise ATM machines
  ➔ Malware that directly steal credit card data may also be installed on these devices

Impact of cybercrime on banks:

- Serve impact on banking industries
  ➔ Operational disruption
  ➔ Altered business practice

➔ Reputation damage
➔ Financial loss
➔ Stolen intellectual property
➔ Legal issues

Case Study:

- Cosmos Bank Cyber Attack in Pune India:
  ➔ Bank was targeted by cyber attacker in 2018
  ➔ Attacker stole Rs. 94.42 crores (Billions)
  ➔ Shaked the entire banking industry in India
  ➔ Hacker gained access to the bank's ATM server
  ➔ Stole personal information of Debit cardholders and Visas in large number
  ➔ Money was wipeds out
  ➔ 28 ntations withdrew the funds as soon as they were notified.