Prakash Sir, Delivery Head - HCL @ Prime Intuit on 08/03/22
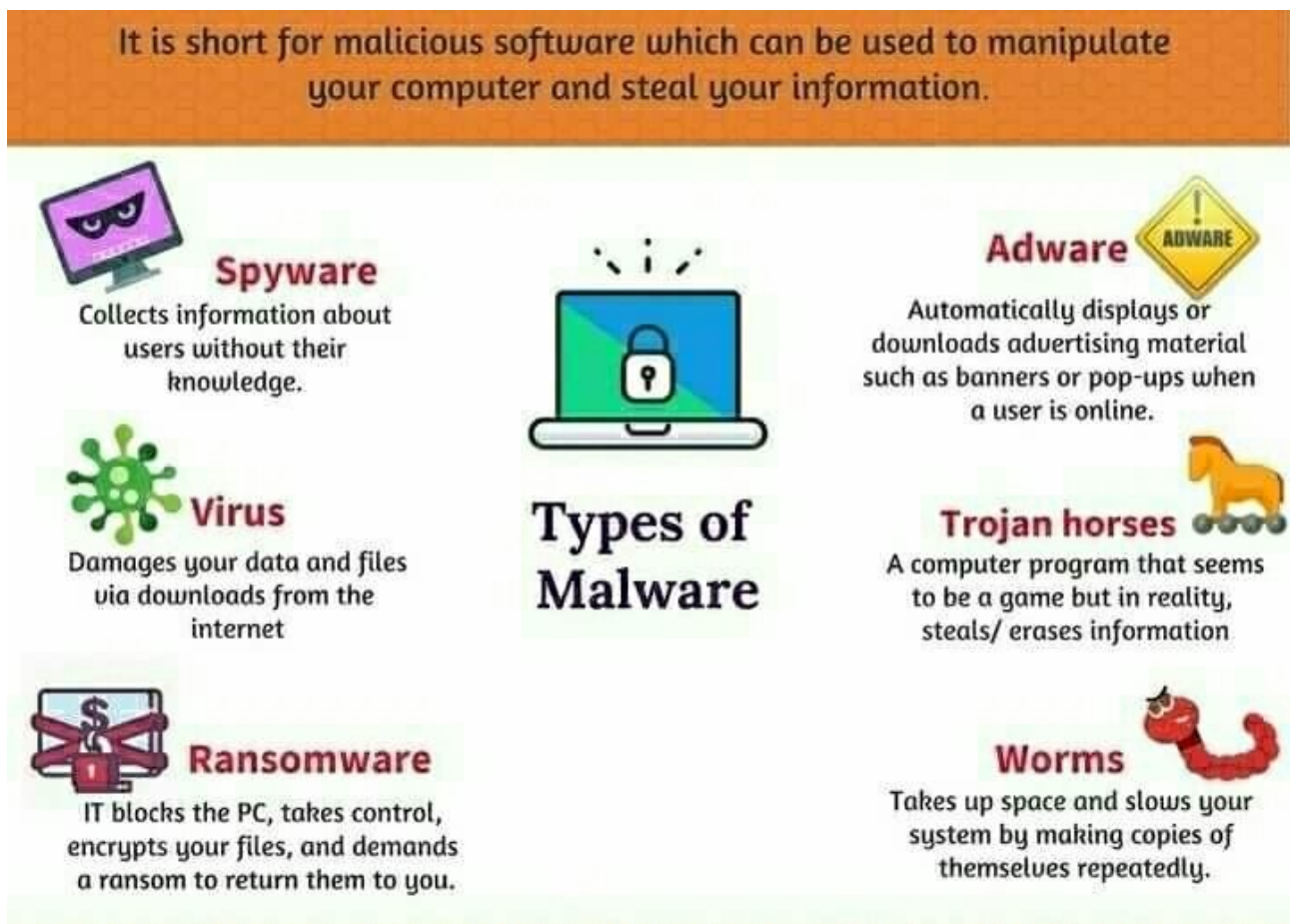## *Broad Topics mentioned in the interaction*

- **Computer**
  - computer is digital electronic machine that can be programmed to carry out set of operations say arithmetic or logical operations automatically.
    - Modern computers perform generic sets of operations known as programs.
      - These **programs** enable computers to perform a wide range of tasks.
  - abbreviation : Common Operating Machine Purposely used for Technological and Educational research.
  - **Things that Affects Computer** like
  - **Types of Malware**

It is short for malicious software which can be used to manipulate your computer and steal your information.
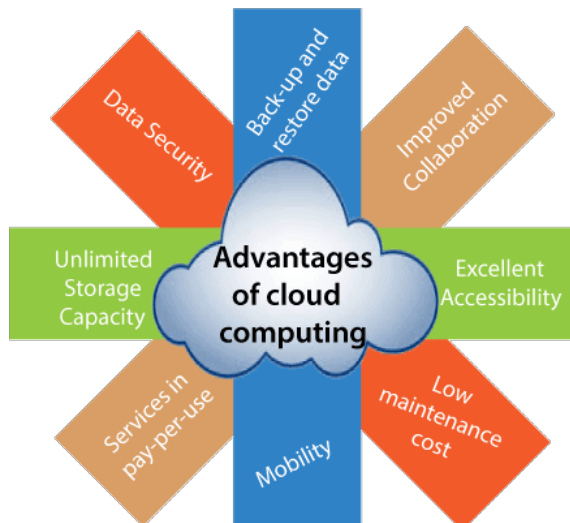
Spyware
Collects information about users without their knowledge.

Adware
Automatically displays or downloads advertising material such as banners or pop-ups when a user is online.

Virus
Damages your data and files via downloads from the internet

Types of Malware

Trojan horses
A computer program that seems to be a game but in reality, steals/ erases information

Ransomware
IT blocks the PC, takes control, encrypts your files, and demands a ransom to return them to you.

Worms
Takes up space and slows your system by making copies of themselves repeatedly.

- **Virus**
  - abbreviation : Vital Information Resources Under Seize
- **Computer related emerging Concepts**
  - **Internet**
    - Abbreviation : Interconnected Network of all the Web Servers Worldwide.
    - International Network
    - How it works
      - Internet simply moves data from one place to another, so that we can chat, browse and share. Data moves over the Internet in a manner called "packet switching." What packet switching basically does is send your data in separate pieces - each tagged with your intended destination.
      - It works by using a packet routing network that follows Internet Protocol (IP) and Transport Control Protocol (TCP) [5]. TCP and IP work together to ensure that data transmission across the internet is consistent and reliable, no matter which device you're using or where you're using
    - What happens when we enter web address in browser
      - (Covered in HTML Class 1)
  - **Intranet**
    - private network contained within an enterprise that is used to securely share company information and computing resources among employees
  - **Web** / www
    - World Wide Web, commonly known as the Web, is an information system where documents and other web resources are identified by Uniform Resource Locators, which may be interlinked by hyperlinks, and are accessible over the Internet

- www1 , www2
  - WWW1 or WWW2 and the like are **hostnames or subdomains, used for load balancing on domains with large user loads**.
  - number indicates that the data your web browser is accessing is being sent from a different web server than the one serving the main WWW domain
- **.com .net .org**
  - The extensions on Web addresses, called **top-level domains**, sometimes serve as an indication of the site's origin or purpose, but in many cases, are nothing more than an aesthetic or marketing choice.
  - Three of the most common TLDs, .com, .org and .net, are abbreviations for "commercial," "organization" and "network" respectively, but common use has moved away from these definitions, with .com becoming the most popular TLD even for sites with no commercial activity.
- **Browser**
  - How web browser helps gather Data
  - A software application used to access information on the World Wide Web is called a Web Browser. When a user requests some information, the web browser fetches the data from a web server and then displays the webpage on the user's screen
  - web browser's primary function is to render HTML, the code that is used to design or "mark up" web pages
- **Cloud**
  - Simply put, the cloud is the Internet–more specifically, it's all of the things you can access remotely over the Internet. When something is in the cloud, it means it's stored on Internet servers instead of your computer's hard drive

- Advantages

-
- **Cloud server technology**
  - cloud server is **a pooled, centralised server resource that is hosted and delivered over a network–typically the Internet–and accessed on demand by multiple users**.
  - Cloud servers can perform all the same functions of a traditional physical server, delivering processing power, storage and application
- **Artificial Intelligence AI**
  - *is ability for machines to learn, think and make decisions on there own without human intervention*
- **Machine Learning ML**
  - Statistical tools which can analyse, explore & understand data , and this ML helps machines to have own AI
  - **AI & ML relation**
    - AI solves tasks that require human intelligence while ML is a subset of artificial intelligence that solves specific tasks by learning from data and making predictions. This means

that all machine learning is AI, but not all AI is machine learning.

- **Data**
  - Rising prominence
    - Data generated till 2014 = Data generating now everyday
  - Data Protection
    - Data privacy is the protection of personal data from those who should not have access to it and the ability of individuals to determine who can access their personal information.
    - Right to Privacy Fundamental right
    - Data Protection Bill
  - Different roles in Data Science
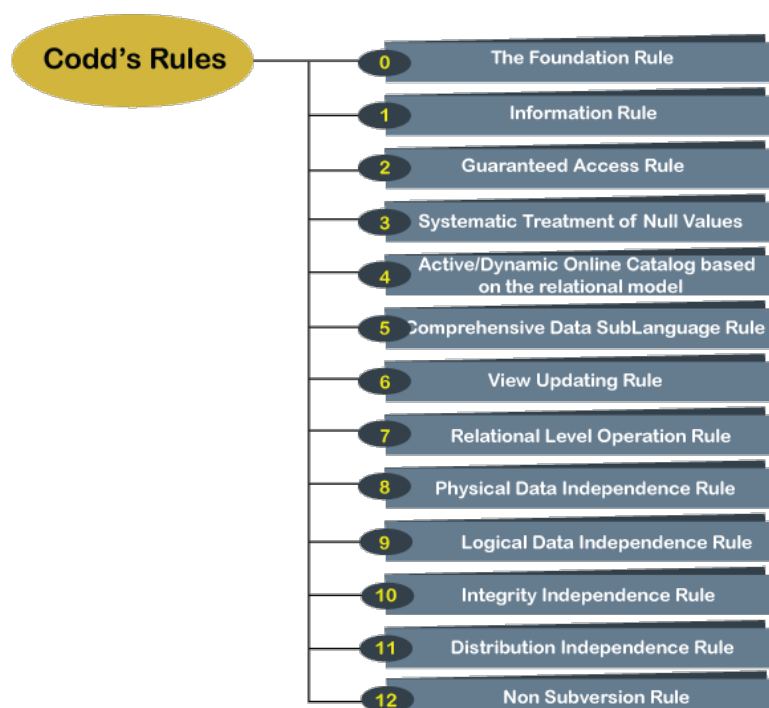   - Covered in other PI PDFs
- **Data Science Specifics**
  - **Python**
    - What is it
      - Python is an **interpreted high-level general-purpose programming language**.
      - design philosophy : code readability & use of indentation
      - **Advantages**
        - Easy to Use
        - efficient
        - has multiple Libraries and Frameworks
        - Community and Corporate
    - why snake name
      - <u>Python</u> was named after the comedy group Monty Python , not the <u>family of snakes</u>
      - **Python was the brainchild of Guido van Rossum, a Dutch programmer, during a Christmas break**. The new script language was a derivative of ABC programming

language. Rossum was a big fan of Monty Python, a British comedy group and got his inspiration from them

- Origin Basics History
  - Covered in sir PDF python 1
- **Data Base Management System DBMS**
  - A database management system (or DBMS) is essentially nothing more than a computerized data-keeping system. Users of the system are given facilities to perform several kinds of operations on such a system for either manipulation of the data in the database or the management of the database structure itself.
- **Relational Database Management System RDBMS**
- RDBMS is a type of database management system (DBMS) that stores data in a row-based table structure which connects related data elements. An RDBMS includes functions that maintain the security, accuracy, integrity and consistency of the data. This is different than the file storage used in a DBMS
  - Ex Oracle MS SQL
  - founder General EF Cord
  - Number of Rules in RDBMS = 12

Codd's Rules

0	The Foundation Rule
1	Information Rule
2	Guaranteed Access Rule
3	Systematic Treatment of Null Values
4	Active/Dynamic Online Catalog based on the relational model
5	Comprehensive Data SubLanguage Rule
6	View Updating Rule
7	Relational Level Operation Rule
8	Physical Data Independence Rule
9	Logical Data Independence Rule
10	Integrity Independence Rule
11	Distribution Independence Rule
12	Non Subversion Rule

- **DBMS Vs RDBMS : Comparison & Difference**

DBMS	RDBMS
• DBMS stands for "Database Management System".	• RDBMS stands for "Relational Database Management System".
• DBMS technology stores the data in the form of files.	• RDBMS stores the data in the form of tables.
• DBMS is designed to handle small amounts of data.	• RDBMS is designed to deal with vast amount of data.
• DBMS provides support only for a single user at a time.	• RDBMS provides support for multiple users at a time.

- **Information Technology IT Domain Related**
  - **Software related**
    - How Companies get projects
      - Bidding
    - IT Project Management
    - Customer Management
    - Enterprise Resource Planning ERP
    - Software Life Cycle
      - Testing Life cycle
      - Product life cycle
  - **IT terminologies**
    - Status Report
  - **Different roles in IT**
    - Project Manager
    - Delivery Manager
  - **Miscellaneous**

- Handling - converting File formats
- Payment Gateways