**What Is File? What are the different modes of file?**  
In computing, a file is a named collection of related information or data stored on a storage medium such as a hard disk, SSD, or in memory. Files are organized and managed within a file system, which defines how files are named, accessed, and organized on the storage medium. Files can contain a wide range of data types, including text, images, executable programs, configuration settings, and more.

In Python, files can be opened and manipulated using different modes. The file mode specifies the purpose of opening the file and what operations can be performed on it. The mode is specified as a string when opening a file using functions like **open()** in Python.

Here are the common file modes in Python:

1. **Read Mode ('r')**:
   * Opens the file for reading only.
   * The file pointer is placed at the beginning of the file.
   * If the file does not exist or cannot be opened, it raises

**FileNotFoundError**.

1. **Write Mode ('w')**:
   * Opens the file for writing only.
   * Creates a new file if it does not exist.
   * If the file already exists, it truncates (clears) the file content.
2. **Append Mode ('a')**:
   * Opens the file for writing (appending) at the end of the file.
   * Creates a new file if it does not exist.
   * The file pointer is positioned at the end of the file.
3. **Read and Write Mode ('r+')**:
   * Opens the file for both reading and writing.
   * The file pointer is placed at the beginning of the file.
   * Raises **FileNotFoundError** if the file does not exist.
4. **Write and Read Mode ('w+')**:
   * Opens the file for both reading and writing.
   * Creates a new file if it does not exist.
   * If the file exists, truncates the file.
5. **Append and Read Mode ('a+')**:
   * Opens the file for reading and appending.
   * Creates a new file if it does not exist.
   * The file pointer is placed at the end of the file.