File: is a named location on a secondary storage media where data is stored permanently for later access(reusablity). Types of files: 1. Text files:sequence of characters consisting of alphabets,numbers and any other special symbols. Examples: .txt,.py,.csv etc ASCII and UNICODE 65 => 1000001 => 'A' - Each line of text file is terminated by a special character(\n), called the Enf Of Line(EOL) 2. Binary files: are stored in the form of bytes(0s and 1s) Examples: images,audio files,video file, executeble(.exe),compresses files - binary files are not in human readable form - we need specific software to read/write the content of binary files encode: convert string into byte object decode: convert a byte object into string working with files: - opening the file: file_object = open(File Name with its path and extension,File access Mode) - specify file operations read/write - closing the file: file_Object.close() split(): used to display each word of a line separately as an element of a list splitlines():each line is returned as element of list. file access mode: r => read mode(default mode) w => write mode x => Exclusive creation a => append mode t => text mode(default) b => binary mode + => more than one mode r+ => read as well as write w+ => write as well as read r+t => read in text mode rb => read in binary mode rb+ => read as well as write in binary mode a+ => append as well as read write opertions: write(): for writing a single string. writelines(): for writing a sequence of strings(i.e. by using iterators like list,tuple etc.) .dat pickle module: To save any object structure along with the data , python provides a module pickle. - The module pickle is used for serializing(pickling) and deserializing(unpickling) any python objcet structure. Serialization (Pickling): is the process of transforming data or an object in memory to a stream of bytes called byte stream. Theses byte streams in a binary file can then be stored in a disk, or in database or set through a network. DE-Serialization (UnPickling): is the inverse of pickling process where a byte stream is converted back into python object. - pickle module deals with binary files. dump(): is used to convert (pickling) python object for writing data into a binary file. The file in which data are to be dumped, it needs to be open in binary write mode. syntax: dump(data_object, file_object) data_object => object that has to be dumped(write/store) to the file file_object => file in which data is to be dumped. load(): used to load (unpickling) data from a binary file. syntax: store_object= load(file_object)