

CLASS- XII	SUBJECT- COMPUTER SCIENCE	DATE:
CHAPTER: 7	CHAPTER NAME: FILE HANDLING	

SUMMARY SHEET	
Pedagogical Approach: Instruction, Practical and mixed participation-based learning	
Learner Previous Knowledge	Python's programming concepts and about file management
Target Knowledge	File handling: Need for a data file, Types of file: Text files, Binary files and CSV (Comma separated values) files. • Text File: Basic operations on a text file: Open (filename – absolute or relative path, mode) / Close a text file, Reading and Manipulation of data from a text file, Appending data into a text file, standard input / output and error streams, relative and absolute paths. • Binary File: Basic operations on a binary file: Open (filename – absolute or relative path, mode) / Close a binary file, Pickle Module – methods load and dump; Read, Write/Create, Search, Append and Update operations in a binary file. • CSV File: Import csv module, functions – Open / Close a csv file, Read from a csv file and Write into a csv file using csv.reader () and csv.writerow().

Period No. (approx. 40 min each)	Lesson Objectives
1	• File handling • Need of files • Types of files
2	• Relative and absolute paths
3	• Basic operations on Text File • Read • Write • Append and Update • Standard input / output and error streams
4	• Basic operations on Binary File • Read • Write • Append and Update
5	• Basic operations on CSV File • Open / Close a csv file • Read from a csv file • Write into a csv file
Pre-requisite for the course (KNOWLEDGE)	This lesson requires the following pre-knowledge: • Knowledge of basic programming of Python. • Flow of controls. • Structure of Files.
Learning Objectives	Students will be able to: • Understand the purpose of file handling • Different types of files • Different operations on files • Know the difference among Text ,Binary and CSV files • Understand about absolute and relative paths • Develop Program to maintain data in files
Life Skills	• Problem Solving • Self-Analysis
Teachers' activity (Methodology used)	Demonstration based active-learning instructional strategies: • Teacher will introduce the topic by the purpose of File Handling. Explain Types of File Handling. • Describe features of all files

	• Perform different operations (open ,read, write ,modify ,close) on Text, Binary and CSV Files. • Explain Relative path and absolute path by the real life examples • Execute programs based on all types of files Activity: • Give small codes to find outputs • Give program to find errors Problem solving method : • Give some programs to write code:- ➤ WRITE A CODE TO WRITE YOUR NAME IN TEXT FILE "NAME.txt". ➤ WRITE A PROGRAM TO READ TEXT FILE "NAME.txt" AND PRINT ITS CONTENT ON SCREEN ➤ WAP TO COUNT NUMBER OF LINES IN A TEXT FILE "TEST.txt". ➤ WAP TO COUNT NUMBER OF WORDS IN A TEXT FILE "KV.txt". ➤ WAP TO COUNT "THE" WORD IN TEXT FILE "SCHOOL.txt". Discussion points: • Need of File Handling. • Purpose of different types of open modes in file. • Advantages and disadvantages of all types of files. • Create a binary file with roll number, name and marks. Input a roll number and update the marks. • Remove all the lines that contain the character 'a' in a file and write it to another file. Inquiry based learning (Critical thinking and Problem solving): • Create a small project based on real life applications like as Students record management, population survey , Games etc.
	Recapitulation (Collaborative learning): • Frame a MIND-MAP indicating the basic operations on Files. • Create a menu driven program based on all operations for each type of files.
Teaching Learning Aids	➤ e-book, ➤ power point presentation ➤ Videos ➤ White Board ➤ Python Interpreter
Students' Learning Outcomes	Students would be able to: • Know the purpose of file handling. • Apply the concept of file handling. • Explain the features of text file, Binary file and CSV file. • Develop a software use of file handling concepts.

	• Understand the different types of paths. • Describe the internal file management. • Create code as per requirement on files.
Assessment	• Continuously monitor student's learning growth by asking oral questions. • Promoting active involvement of students in their own learning by asking students to focus on written practice of coding in the class. • Programming Learning by hands on Python coding activities. • Written test • Questionnaire • Group discussion
Self-Study, Assignments, Homework	• Self-Study (reinforcing the concepts by going through the chapter in the book)-The teacher would ensure that each student should execute all programs on python interpreter . • Performing simple projects under the guidance of the teacher. • Discussion of last year CBSE Board questions by the teacher in the class. Students will write the answers in their classwork notebooks. Teacher will take rounds in the class to ensure that all the students do written practice and practical also. Homework (Question Bank): On completion of the chapter, students will be answer the following revision questions in their homework notebooks: ➤ Differentiate between a text file and a binary file. ➤ What are the advantages of CSV file formats? ➤ Differentiate between file modes rb and rb+ in open(). ➤ Write a program to count number of vowels in a text file "KV.txt". ➤ Create a binary file with name and roll number. Search for a given roll number and display the name, if not found display appropriate message. ➤ Write a statement to open a binary file C:\files\Text.txt in read and write mode by specifying for file path in two different formats. ➤ Read a text file and display the number of vowels/ consonants/ uppercase/ lowercase characters in the file.