Department of Computer Science and Engineering

Academic Year 2024– 2025(Odd Semester)

Degree, Semester & Branch: B.E III & EEE

Course Code & Title: CS3353 & C Programming and Data Structures

Name of the Faculty member (s): Mrs.M.Dhivya, AP/CSE

Innovative Practice Description

- **Unit / Topic: Unit II / File Handling**
- **Course Outcome:** CO2
- **Topic Learning Outcome:** TLO6

Activity Chosen: MindMap

- **Justification:**

  Mind maps are one of the most common diagramming tools that help students learn new things about any given topic. student can use to demonstrate what they have learned in a visually creative manner. It allows them to explore their knowledge, apply critical thinking skills and summarise key concepts on a page.

- **Time Allotted for the Activity:** 15 Minutes
- **Details of the Implementation:**
  - Faculty explained the concept of files, types of file, basic file operation and its method.
  - Based on the discussion the teacher asked the Student to draw a mind map related to the topic within 15 minutes.
  - The structure of the mind map involves the Tree like Hierarchy
    Root Node: The root node represents the File Handling in C.
    Branches: This focuses on File types, file access method and functions in file.
    Leaves: Leaf node represent the in-built file methods
  - Each student created a mind map on file handling techniques.
  - The faculty collected the sheet and appreciated the students.
  - When comparing student mind maps for file handling in C, the approach will vary based on the level of understanding, focus areas, and depth of this method.
  - A beginner student will focus on the fundamental concepts of files in C.
  - An intermediate student would go further into the files modes and its method.
  - An advanced student would deeper into write an example program on file operations (open read write close).

CO – PO / PSO mapping:

CO	PO1	PO2	PO3	PO9	PO10	PO12	PSO1	PSO2	PSO3
CO2	3	2	1	1	2	1	1	1	1

(1 – Low 2 – Moderate 3 – High)

Innovatice Practice	Justification for correlation
PO1	Students will be able to apply the basic Knowledge of engineering fundamentals is necessary to develop C programs using advanced features such as structures.
PO2	Students will be able to Identify, Concepts of C Structures, pointers and File handling are used in analysis of complex engineering problems
PO3	Students will be able to Advanced C programming concepts are used in designing solutions for complex engineering problems.
PO9	Students will be able to Students will be able to write C program individually using advanced C Concepts such as Structure and pointers.
PO10	Students will be able to Students will be able to execute and present C programs using Structure, pointers concepts in C
PO12	Student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge using advanced Concepts of C.
PSO1	Students can be able to analyze software packages using advance feature in **C**
PSO2	Students will be able to design the prototype of embed system using advance feature in c
PSO3	Students will be able to design the industrial automation system using advance feature in C

Fig 1: Students are doing Mind map for Files Concepts in C

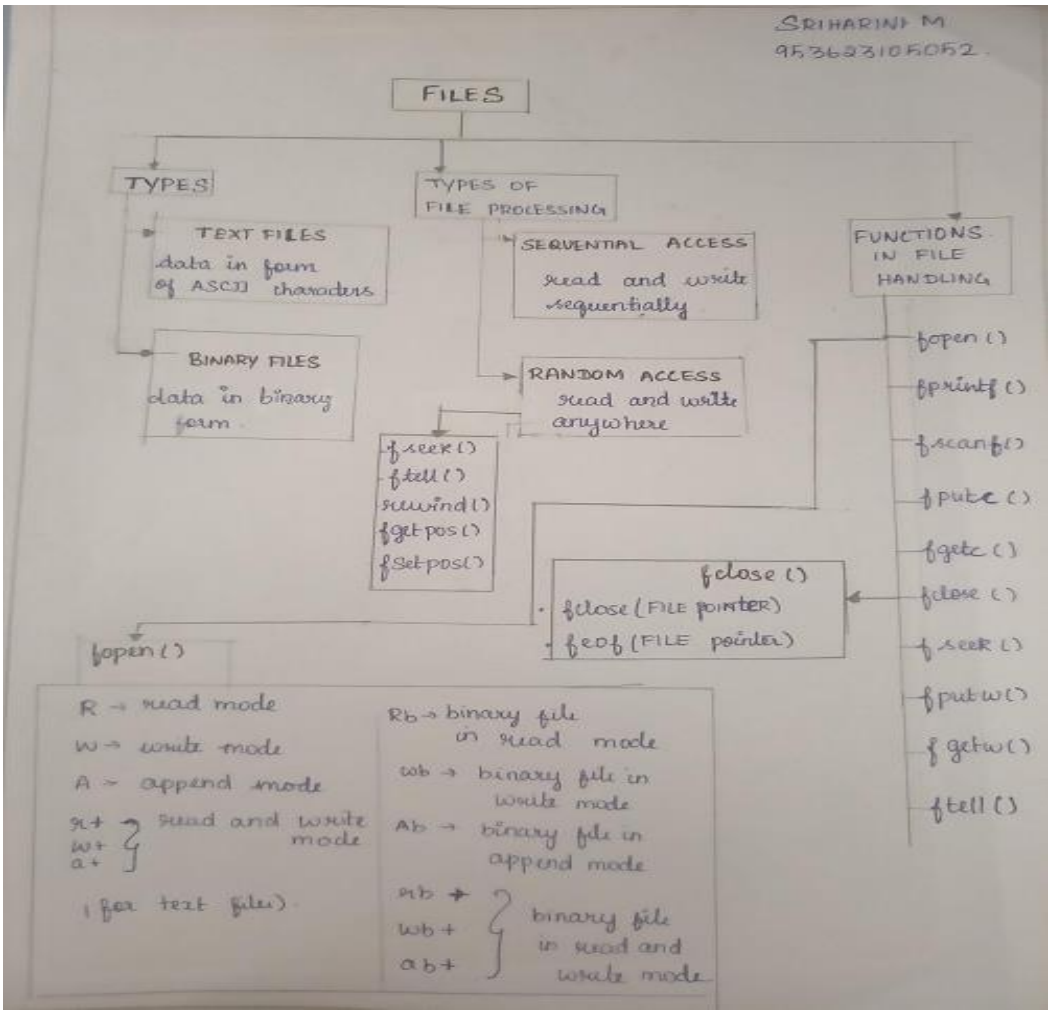

Fig 2: Sample Mindmap

Reflective Critique:

- ***Feedback of practice from students and other stakeholders:***
  - Students found the mind map effective for visualizing how different types of file and method for creating a files.
  - However, a few students mentioned that they would benefit from a hands-on coding example or real-world scenario alongside the mind map to deepen practical understanding.
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- ***Benefit of the practice:***
  - Students will able to building chapter outlines
  - Students will identify and analyse primary issues in group work
  - Students prepare a chart for Dream Jobs
  - Students can make plans with different job interviews
  - Students can plan vacations & organizing events.

❖ ***Challenges faced in implementation:***

- The mind map format focused heavily on theory, making it hard for students to see practical applications.
- There was limited time to cover all mind map topics in detail.
- A mind map is often an individual exercise, but students may feel they benefit more from group discussions where they can clarify doubts with peers and collaboratively build out the map.

References:

https://www.ritrjpm.ac.in/images/computer-science/5CS8591Mindmap.pdf
https://www.lucidchart.com/pages/how-to-make-a-mind-map
https://www.ritrjpm.ac.in/images/computer-science/Mind%20Map.pdf
https://www.interaction-design.org/literature/topics/mind-maps