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| MCA 207  DATA STRUCTURES LAB IN C | CO1 :Basic ability to analyze algorithms and master different algorithm design techniques (divide and conquer, greedy, backtracking etc.);build the ability to apply them to solve the problems and to determine algorithm correctness and efficiency (time/space).  CO 2: Master a variety of data structures (array,stack,queue,linkedlist,trees,graphs) by illustrating and implementing them ; Identify appropriate data structure and algorithm for a given contextual problem and develop in C.  **CO 3:** Identify, model, solve and develop code for real life problems like shortest path and minimum spanning tree using graph theory; Examine and analyze the importance of balanced trees real world dynamic applications; develop and compare the comparison-based search algorithms and sorting algorithms |

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| Linux Lab | **CO1**: Work confidently in Linux environment; Ability to analyze basic system information, perform troubleshooting and optimize the system performance; Configure a Linux distribution to perform common system administrator task .  **CO2**: Develop shell scripts and programming scripts to automate various tasks and employ these principles in solving technical problems.  **CO3:** Master the basics of Linux administration; Generate local or domain users’ accounts and implement security policies; Familiarize with server configuration NFS,FTP,DHCP,DNS servers and Web servers to deploy services for the  clients. |
| Mini Project | **CO1**:use the knowledge to identify, understand the real world problems and feasibility study; Work as a member of a team.  **CO2:** Awareness of design methodologies, selection and Implementation of proper Software development Model; Use, understand, and interpret results ,.to determine the cost and profitability of the proposed system.  **CO3**: Get equipped with technical report writing /documentation of the project. |
| Computer Graphics Lab | **CO1:** Basic understanding of contemporary graphics hardware; knowledge of the principal basics of computer graphics; skills to develop interactive graphics applications in OpenGL using one or more graphics application programming interfaces.  **CO2**: able to specify and design 2D graphics algorithms including: line drawing, polygon filling, clipping, and transformations,, differentiate the most common modeling approaches; geometrical transformations; learn the basics of 3D computer graphics algorithms including viewing transformations, hierarchical modeling, color, lighting and texture mapping.  **CO3:** Demonstrate computer graphics and simulate a scene |