

||Jai Sri Gurudev||  
**BGS INSTITUTE OF TECHNOLOGY, B G NAGAR**  
**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**  
**COURSE OUTCOMES AND CO-PO-PSO MAPPING**

**Course Coordinator: M J Prasanna Kumar**  
**Sem & Sec: III & 'B'**

**COURSE CODE: 17CSL38**

**COURSE NAME: Data Structure Laboratory**

|            |   |
|------------|---|
| <b>CO1</b> | Analyse and compare various linear and non-linear data structure                                    |
| <b>CO2</b> | Code, debug and demonstrate the working of different types of data structure and their applications |
| <b>CO3</b> | Implement, analyse and evaluate the searching and sorting algorithms                                |
| <b>CO4</b> | Apply the appropriate data structure for solving real world problems                                |

|             |   |
|-------------|---|
| <b>PSO1</b> | Ability to apply Mathematical Methodologies, Management Principles and Ethics, Electronics and Embedded Systems and Programming Technologies to solve real time problems.   |
| <b>PSO2</b> | Ability to apply software design and development practices to develop software in emerging areas such as Internet of Things, Data Management, Social Networking and Security, Cloud and High-Performance Computing. |

| CO/PO'S | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| CO1     | 3    | 2    | 2    | 1    | -    | -    | -    | -    | -    | -     | -     | -     | 2     | -     |
| CO2     | 3    | 2    | 2    | 2    | 1    | -    | -    | -    | -    | -     | -     | -     | 2     | -     |
| CO3     | 3    | 2    | 2    | 2    | -    | -    | -    | -    | -    | -     | -     | -     | 2     | -     |
| CO4     | 3    | 2    | 2    | -    | -    | -    | -    | -    | -    | -     | -     | -     | 2     | -     |
| AVG     | 3    | 2    | 2    | 1.5  | 1    | -    | -    | -    | -    | -     | -     | -     | 2     | -     |

| COs             | Level | Justification   |
|-----------------|-------|---|
| <b>CO1.PO1</b>  | 3     | gains knowledge on linear and non-linear data structures                |
| <b>CO1.PO2</b>  | 2     | able to decide on which type of data structure to use for given problem |
| <b>CO1.PO3</b>  | 2     | can find the solution for the problem given using data structure        |
| <b>CO1.PO4</b>  | 1     | able to validate the solution found                                     |
| <b>CO1.PSO1</b> | 2     | able to use different data structure to solve the problem               |
| <b>CO2.PO1</b>  | 3     | gain the knowledge on data structures                                   |
| <b>CO2.PO2</b>  | 2     | able to analyse the performance of different types of data structure    |
| <b>CO2.PO3</b>  | 2     | can design solution using different type of data structure              |

|                 |   |   |
|-----------------|---|---|
| <b>CO2.PO4</b>  | 2 | can able to evaluate the result of solution found   |
| <b>CO2.PO5</b>  | 1 | can able to use tools like c compilers and editors to develop program                     |
| <b>CO2.PSO1</b> | 2 | can design program which involves data structure  |
| <b>CO3.PO1</b>  | 3 | gain the knowledge on searching and sorting algorithms                                    |
| <b>CO3.PO2</b>  | 2 | can analyse searching and sorting algorithms  |
| <b>CO3.PO3</b>  | 2 | able to design searching and sorting algorithms   |
| <b>CO3.PO4</b>  | 2 | able to evaluate searching and sorting algorithms   |
| <b>CO3.PSO1</b> | 2 | able to develop searching and sorting algorithms  |
| <b>CO4.PO1</b>  | 3 | gain the knowledge on how to apply different of data structure depending on problem given |
| <b>CO4.PO2</b>  | 2 | able to decide on data structure that suits for solving problem.                          |
| <b>CO4.PO3</b>  | 2 | able to use appropriate data structure for designing solution that solves problems        |
| <b>CO4.PSO1</b> | 2 | able to design data structure for solving problems  |

**Signature of Course Coordinator**

**Signature of Module Coordinator**

**Signature of HoD**