

**GLS UNIVERSITY**  
**Faculty of Computer Applications & Information Technology**  
**BCA Programme**  
**SEM III**  
**DATA STRUCTURE PRACTICAL**

**Module – 3 & 4**

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|---------------------------|--|
| <b>1.</b>                 | Write a C++ Program to implement the Singly Linked List.   |
| <b>2.</b>                 | Write a C++ Program to implement the Doubly Linked List.   |
| <b>3.</b>                 | Write a C++ Program to implement the Circular Singly Linked List.  |
| <b>4.</b>                 | Write a C++ Program to implement the Circular Doubly Linked List.  |
| <b>*</b>                  | <p style="text-align: center;">Perform the following operations on above linked list:</p> <ol style="list-style-type: none"> <li>1. Create List</li> <li>2. Add First</li> <li>3. Add Last</li> <li>4. Add at Location/Middle</li> <li>5. Delete First</li> <li>6. Delete Last</li> <li>7. Delete at Location/Middle</li> <li>8. Display List</li> </ol> <p>*CountNode<br/>*AddNodes</p> |
| <b>5.</b>                 | Write a C++ Program to implement the Stack using Linked List.  |
| <b>6.</b>                 | Write a C++ Program to implement the Simple Queue using Linked List.   |
| <b>*** Module – 4 ***</b> |  |
| <b>1.</b>                 | <p>Write a C++ Program to Implement the Binary Search tree for the following operations:</p> <ol style="list-style-type: none"> <li>1. CreateTree</li> <li>2. Inorder</li> <li>3. Postorder</li> <li>4. Preorder</li> <li>5. Search</li> </ol>   |