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Problem 7: Case Study of Doubly Linked List: Write a modular program using doubly linked list to demonstrate the basic concept of Simple Queue. For verifying all boundary conditions of simple queue consider the size of queue, i.e., n = 5. The main focus of implementation should on the following methods

isEmpty()

isFull()

Create_Queue()

Insert_in_Queue()

Delete_in_Queue()

Search_in_Queue()

Update_in_Queue()

You are required to bind all above methods with the help of User Interface method. You are also requested write algorithm for each method defined in the program.

Note: Consider the left most pointer as Rear Pointer and right most pointer as Front pointer. Counter=0 means there is element in the queue. If Counter=1 means 1 record/item/value in the queue. Counter increased and it becomes 5. Queue will be treated as full. If queue is empty Rear=Front=NULL. If Rear =Front=1 (address) both the pointers having same address. If full means Rear will hold 5^{th} location and Front will 1 location, iff no deletion is performed.