Practice Assignment

Module 2	
Sr. No.	**Questions**
1	A friend who's new to programming asks you about the pros and cons of using arrays over linked lists and vice versa. Based on static and dynamic allocation, provide a comprehensive answer.
2	You're developing a music player app that allows users to play songs in a specific order, shuffle, or repeat. Discuss the data structures you would consider, keeping in mind the concepts of arrays and linked lists.
3	A game development company wants to design a system that keeps track of game states, allowing players to undo or redo their actions. Explain how stacks could be an essential structure for this functionality.
4	You are designing a ticketing system for a busy metro station. Describe how a queue would be an apt choice for managing the flow of passengers and why.
5	A new startup is working on a browser application. Discuss the significance of stacks in developing features like forward and backward navigation.
6	During a meeting, the team discusses implementing a feature that requires both FIFO and LIFO operations. Illustrate the

		application of DEQueues in such a scenario.
7		You are building a software that manages print tasks for a busy office. The tasks have varied levels of priority, and sometimes the order needs to be changed. Reflect on how access restricted lists can assist in efficiently managing these tasks.
8		An intern approaches you, confused about when to use a stack and when to use a queue. Provide a real-world analogy or scenario to help differentiate between these two structures.
9		A company wants to implement a messaging app that allows users to both see the most recent messages and access older ones quickly. Explain the role DEQueues can play in achieving this.
10		You're tasked with optimizing a warehouse's inventory system. The items need to be accessed both from the front and the back, depending on their type. Discuss the application of DEQueues in such an environment.