

**Institute of Engineering and Technology**  
**Ahmedabad University**  
**Semester – II**  
**Section – A & B**  
**Lab Assignment – Session 6**

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**Assignment Date: Tuesday, March 10, 2015**

**Submission Date: Monday, March 16, 2015**

**Q1.** Design a class in **C++** for implementing the queue data structure of dynamic length (decided during object creation). Use appropriate constructors and destructor for ensuring optimal memory utilization. Overload the binary “+” operator to perform EnQueue operation, and “–” operator to perform DeQueue operation. The Dequeue operation should return the element removed from the queue. Also, overload the “<<” operator to display all the elements of the queue. Use namespace(s) to avoid any possible name clash.

**Q2.** Design a class called “Media” in **Java** containing title, yearOfPublication, and price as data members. Inherit the “Media” class into two classes called “Book” and “CD”. The “Book” class should contain author, and no\_of\_pages as data members, while the “CD” class should contain sizeInMB and playtime as data members. Create appropriate constructors for all the three classes. Create appropriate member functions in order to read and display the values of a book and CD from the user. Implement the above mentioned classes using a menu driven program in a main function.

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