



AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

Faculty of Science and Technology

Department of Computer Science

Data Structure Lab

Total Marks: 15

Name:	ID:	Section: U
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Part: A OBE Evaluation [1x15 = 15 Marks]			
The answer of this part will be evaluated for the following OBE Course Outcome: <b>CO4: Use determined approaches in solving complex real-life problems with specific requirements.</b>			
Knowledge and proper use of Data Structure (5)	Problem Analysis (5)	Solution (5)	Total (15)

1. You are building a support system where user requests must be handled in the exact order they arrive. Once a request is resolved, it should be recorded permanently, with each new entry added at the end. Think about how service lines work and how logs are kept in sequence, then decide which pointer-based structures would best manage the request flow and the completed records. [5+5+5]

**Tasks:**

1. Implement a structure that allows handling requests in arrival order: "Req1", "Req2", "Req3". Then delete one item.
2. As each request is served, add it to another structure that keeps a permanent sequential record. After all are served, display the final state of this record.
3. Create a function to search for "Req2" within the permanent record to verify whether it was served.