

National University of Computer and Emerging Sciences, Lahore Campus



Course:	Data Warehousing and Business Intelligence	Course Code:	DS3003
Program:	BS (Data Science)	Semester:	Fall 2023
Out Date:	26-Oct-2023	Total Marks:	
Due Date:	Thu 2-Nov-2023 (start of class)	Weight:	
Section	BDS-5A	Page(s):	1
Assignment:	4 (Indexing Techniques)		

Instructions/Notes:

- Use any valid assumption where needed.
- You are required to submit the hard copy of your assignment at the start of your class.
- For any query, please contact your TA.

Instructions: You will have to take assumptions for block size (B), record size (R), number of records (r), available memory (K), index record size (R_i), indexing columns, and all remaining factors required in calculations.

Q. Design two types of queries, one with high selectivity and the other with low selectivity, to retrieve data from a table. Calculate the I/O cost for these two queries for all the indexes specified below.

1. Full Table Scan
2. Single Indexing
3. Combining Multiple Indexes
4. Dynamic Bitmap Index
5. Static Bitmap Index
6. Composite Index
7. Clustered Index