National University of Computer and Emerging Sciences



Lab 2

*for*

Object Oriented Programming

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| Section | BCS-B |
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# Lab 2

## **Instructions:**

* If someone is caught using the internet in this Lab ,their marks will be reduced to zero.
* In case of Plagiarism, Straight Zero and report this case to DC.
* Late Submission is not allowed.

### **Question 1**:

Student Database

You are tasked with creating a student database system using pointers and dynamic arrays. Each student record should contain their name.

**Part 1**: Implement a function that dynamically allocates memory for a student database and returns a pointer to the database. The function should take the number of students as input.

**Part 2**: Write a function that takes an index to a student database, an integer as input. The function should find and return the student name.

**To see the use of string in C++, You can see the link:** [**https://www.geeksforgeeks.org/strings-in-cpp/**](https://www.geeksforgeeks.org/strings-in-cpp/)

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### **Question 2:**

Dynamic String Manipulation

You need to create a dynamic string data structure that can store and manipulate strings of varying lengths.

**Part 1**: Implement a function that takes a pointer to a dynamic string and a character as input. The function should append the character to the index specified by the user, of the string.

**Part 2**: Write a function that takes pointers to two dynamic strings as input and returns a new dynamic string that is the concatenation of the two strings.

**Good Luck!**