DEERWALK INSTITUTE OF TECHNOLOGY

Tribhuvan University

Faculties of Computer Science



Bachelors of Science in Computer Science and Information

Technology­­­

(BSc. CSIT)

Course: Discrete Structure (CSC-165)

Semester: II

A Lab Report On:

DISCRETE STRUCTURE

**Submitted to:**

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**Name:**

**Section:**

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| **S.N.** | **LAB TITLE** | **DATE** | **SIGNATURE** |
| 1. | Set Operations |  |  |
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# LAB 1: SET OPERATIONS

**OBJECTIVE:**

i. To study and understand various set operations

ii. To write a C Program to perform different set operations

**THEORY:**

*Write short theory explaining set and its different operations with example.*

**OBSERVATION:**

**TASK 1: Union of two sets.**

**Source Code:**

*Source Code must be handwritten*

**Output:**

*Output must be screenshot of your output and must display your name as well. Add printf("This code is run by your full name");*

**TASK 2: Intersection of two sets.**

**Source Code:**

*Source Code must be handwritten*

**Output:**

*Output must be screenshot of your output and must display your name as well. Add printf("This code is run by your full name");*

**TASK 3: Difference of two sets.**

**Source Code:**

*Source Code must be handwritten*

**Output:**

*Output must be screenshot of your output and must display your name as well. Add printf("This code is run by your full name");*

**DISCUSSION:**

*Discuss briefly about the approach used a lesson learnt after completion of this lab.*

**CONCLUSION:**

*Write concluding remarks.*

**THEORY:**

A set is an unordered collection of well-defined objects. Several operations can be performed on sets.

* Union: It represents the collection of all elements which is the member of at least one set.
* Intersection: represents the set of elements which belongs to both sets.
* Compliment: The compliment of set A is the set of all elements which belong to the universal set and do not belong in A.
* Difference: The difference of two sets A and B is the set containing those elemts in A but not in B.
* Symmetric difference: If A and B are two sets, then their symmetric difference is the set of all elements in A or B but not in both

**Discussion**

Through this lab, I learned how to implement set operations (union, intersection, difference) using arrays in C. This is helpful is database management and data analysis. I learned how to design effective logic in programming.

**Conclusion**

We learned about different set operations and wrote C codes to perform those operations on sets input by the user and printed them to the console. It gave me a hands-on experience on set operations and C programming together.

