DS LAB Sheet

1. Write a program to implement union operation of set.
2. Write a program to implement intersection operation of set.
3. Write a program to implement difference operation of set.
4. Write a program to implement Cartesian product.
5. Write a program to demonstrate the floor and ceiling function.
6. Program to demonstrate the operation of Fuzzy set operations.
7. Write a program to implement Euclidian algorithm to find GCD of two numbers.
8. Write a program to implement Extended Euclidian algorithm to represent GCD as linear combination.
9. Programs to implement binary integer addition, multiplication, and division.
10. Programs to implement Boolean matrix operations join, meet and Boolean product
11. Programs to implement Chinese Remainder Theorem.
12. Programs to generate truth tables of compound propositions.
13. Programs to test validity of arguments by using truth tables.
14. Programs to compute $a^n \bmod m$ and $b^n \bmod m$ by using recursion.
15. Programs to implement binary search algorithm using recursion.
16. Programs to implements Monte Carlo Algorithm (Randomized) algorithm to find the elements from the array.
17. Programs for representing relations.
18. Programs for testing its properties.
19. Program to find the shortest path using Dijkstra's shortest path algorithm
20. Program to generating minimum spanning trees using Kruskal's.