

1. Programs to implement set operations union, intersection, difference, and Cartesian product.
2. Programs to implement ceiling and floor functions.
3. Programs to implement fuzzy set operations.
4. Programs to implement Euclidean and Extended Euclidean algorithms.
5. Programs to implement binary integer addition, multiplication, and division.
6. Programs to implement Boolean matrix operations join, product, and Boolean product.
7. Programs to perform operations with large integers by breaking down them into set of small integers.
8. Programs to generate truth tables of compound propositions.
9. Programs to test validity of arguments by using truth tables.
10. Programs to compute  $a^n$ ,  $b^n \bmod m$ , linear search etc by using recursion.
11. Programs to generate permutations and combinations.
12. Programs to implements some probabilistic and randomized algorithms.
13. Programs for representing relations, testing its properties, and testing equivalence.
14. Programs to represent graphs, finding shortest path, and generating minimum spanning trees.