

Assignment 1

Course: Master of Computer Application (MCA)

Subject: Discrete Mathematics Last Date of Submission: 15/02/2022

1. Write a program to implement Binary search (Recursive and Iterative).
2. Write a program to implement tower of Hanoi (Recursive and Iterative).
3. Write a program to generate a Pascal's triangle.
4. Write a program to implement the following laws:
 - a. Identity laws
 - b. Domination laws
 - c. Double negation laws
 - d. Demorgan's laws
 - e. Associative laws
5. Write a program to implement the tautology, Contradiction/Absurdity and Contingency.
6. Write a program to implement Modus ponens and Modus Tollens.
7. Write a program to implement $\sim\forall xP(x) \equiv \exists x\sim P(x)$.
8. Write a program to find the Union and Intersection of two sets.
9. Write a program to find the power set of the given set.
10. Write a program to find the permutation of the given set.