A

Lab Project Report

on

TIC- TAC -TOE GAME USING PROLOG

Submitted in partial fulfilment of the requirement of the lab

PROLOG LAB

II-B. TECH. II SEM

in

Department of CSE(AI & ML)

Submitted by

K. SAI SRUTI (237R1A6684)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (AI&ML)

CMR TECHNICAL CAMPUS

UGC AUTONOMOUS

(Accredited by NBA, Approved by AICTE, Affiliated to JNTUH)

Kandlakoya, Medchal Road, Hyderabad-501401

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Kandlakoya, Medchal Road, Hyderabad-501401.

DEPARTMENT OF CSE(AI & ML)

CERTIFICATE

This is to certify that a Mini Project entitled with: “TIC-TAC-TOE GAME USING PROLOG” is being Submitted by **K.SAI SRUTI (237R1A6684)** in partial fulfilment of the requirement for completion of the PROLOG LAB II B.Tech II- Semester is a record of a bonfide work carried out under guidance and supervision

Signature of Faculty **Signature of the HOD**

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ABSTRACT

This project presents the development of the classic two-player game Tic Tac Toe using the Prolog programming language. Prolog, known for its strengths in logic-based problem solving, provides a natural way to represent the rules and flow of turn-based games. In this implementation, the game board is represented as a list, and various predicates are defined to manage player moves, validate legal actions, detect winning and draw conditions, and alternate turns between players.

The project aims to demonstrate how declarative programming can be applied to game logic and decision-making. Through recursive rules and pattern matching, Prolog handles game progression and evaluates win conditions effectively. This implementation serves as an educational tool for understanding logic programming principles and offers a foundation for potential enhancements such as AI integration or graphical interfaces.