TIC TAC TOE

-24kb1a05nz(Mukunda)
-24kb1a05kt(Siddish)
-24kb1a05nr(Jaswanth)
-24kb1a0561(Madhu)

CONTEXT

Tic Tac Toe in C

- 1. **Introduction**:

- Overview of Tic Tac Toe
- Importance of programming games

- 2. **Game Features**:

- User input
- Win/draw detection
- Game board display

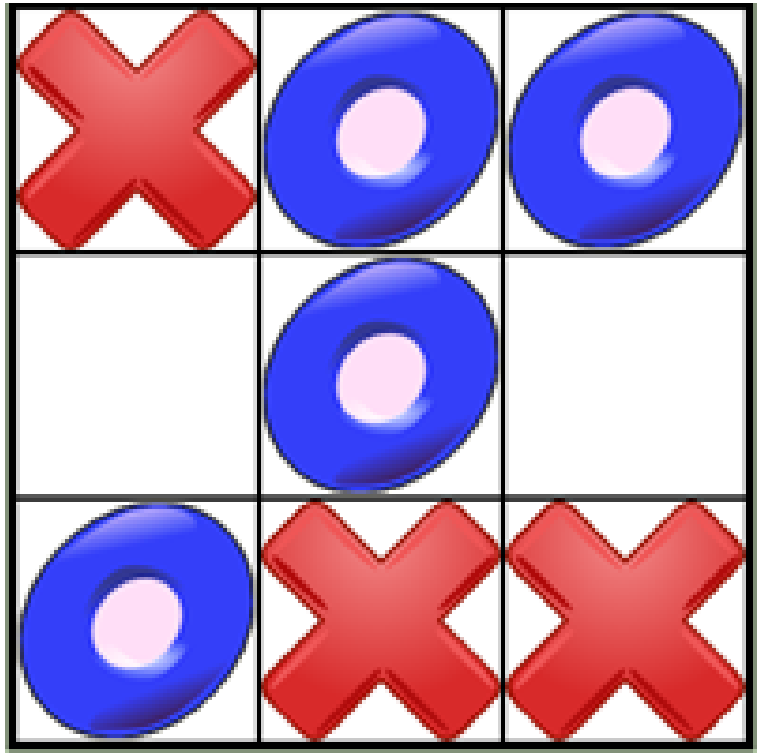
- 3. **Implementation**:

- Arrays for game board
- Functions for game logic

- 4. **Benefits**:

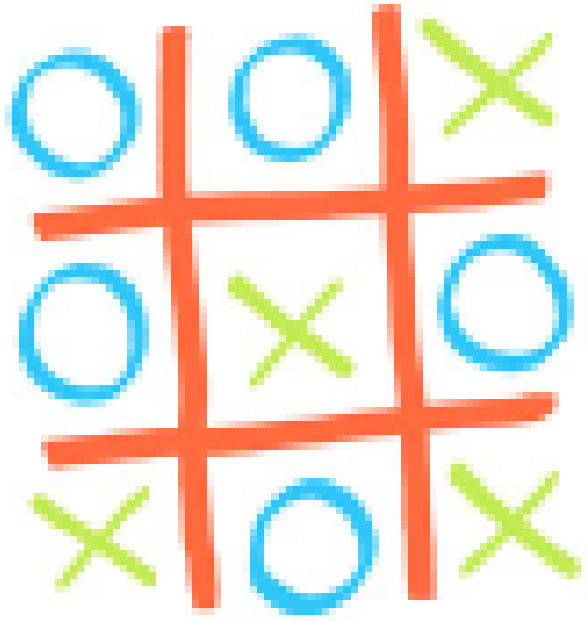
- Improves problem-solving skills
- Enhances programming knowledge

- 5. **Future Enhancements**: - AI opponents - GUI implementation



KEY FEATURES

- 1. **Game Board Representation**:
  - 3x3 grid represented using a 2D array
- 2. **User Input**:
  - Players enter their moves (row and column numbers)
  - Input validation to ensure valid moves
- 3. **Game Logic**:
- Checks for wins (horizontal, vertical, diagonal)
- Checks for draws (all squares filled, no winner)
- 4. **Game Display**:
- Displays the current state of the game board
- Shows player symbols (X and O)
- 5. **Player Switching**: - Alternates between two players (X and O)
- 6. **Win/Draw Detection**: - Announces the winner or declares a draw
- 7. **Game Loop**: - Continues until the game is won or drawn



SOURCE CODE

https://onlinegdb.com/F62fBdE13

ALGORITHM

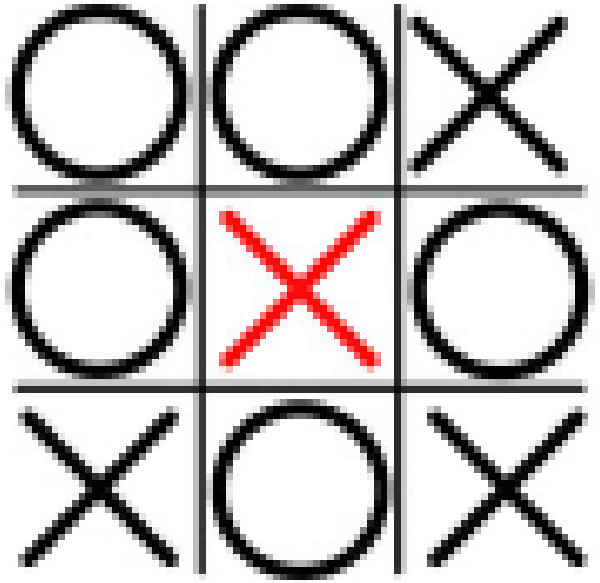
1.**Initialize Game Board**:
- Create a 3x3 grid.

2. **Player Move**:
- Get player input (row and column).
- Validate input.
- Update game board.

3. **Check Win/Draw**:
- Check rows, columns, and diagonals for a win.
- Check if all squares are filled (draw).

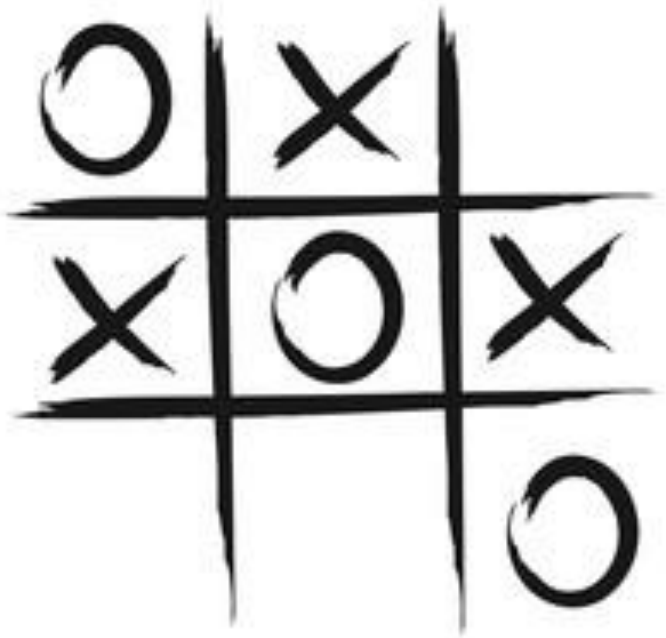
4. **Switch Player**: Alternate between players (X and O).

5. **Repeat**: Continue steps 2-4 until win or draw.



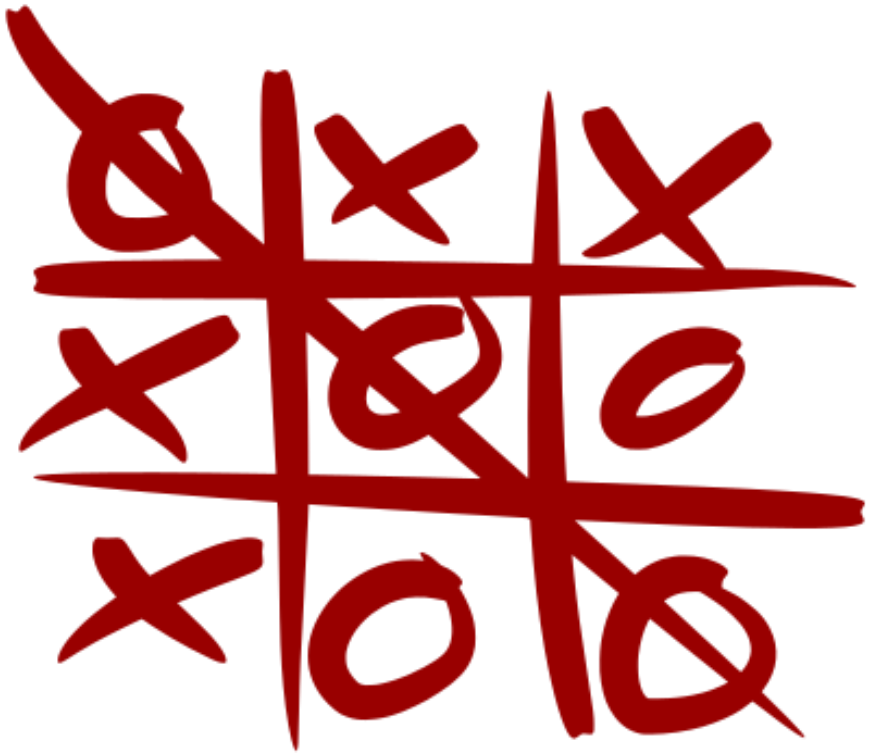
ADVANTAGES

- 1. Improves Problem-Solving Skills
- 2. Enhances Critical Thinking
- 3. Develops Strategic Planning
- 4. Improves Cognitive Function
- 5. Promotes Healthy Competition
- 6. Builds Analytical Skills
- 7. Fun and Engaging



DISADVANTAGES

- 1. Limited Complexity
- 2. Predictable Outcomes
- 3. Limited AI Implementation
- 4. Graphical Limitations
- 5. Error Handling Challenges



CONCLUSION

- - Successfully implemented a console-based Tic Tac Toe game in C.
- - Demonstrated key programming concepts like arrays, functions, and loops.
- - Provided a foundation for further enhancements and improvements.

THANKYOU