



OBJECT ORIENTED PROGRAMMING PROJECT

TIC TAC TOE GAME IN PYTHON

- EMAN RANA
- BEE 15D
- 472195

REASON FOR CHOOSING THIS PROJECT

- Tic Tac Toe is a universally known game, making it an excellent choice for demonstrating programming skills.
- Apply and showcase Object-Oriented Programming (OOP) principles.
- Gain hands-on experience with GUI design and event-driven programming.
- Fun and interactive, encouraging user participation during demonstrations.

APPLICABILITY OF THE PROJECT

1. Game Development Foundations:

1. Provides a foundation for understanding game loops, user interaction, and state management.

2. Interactive Learning Tools:

1. Can be extended for use in workshops or coding competitions.

3. Personal Entertainment:

1. A simple game that people of all ages can enjoy.

TOOLS, LIBRARIES, AND PLATFORM USED

- **Programming Language:** Python
- **Libraries:**
 - **Tkinter:** For building the graphical user interface (GUI).
 - **Winsound:** For integrating audio feedback during gameplay.
 - **Time:** For managing timers and delays.
- **Development Environment:**
 - **Platform:** Windows (for winsound compatibility).
 - **IDE/Editor:** VSCode

BLOCK DIAGRAM OF THE GAME

- **Start Game UI (Enter Player Names) --> Initialize Game Components**
- |
- v
- **Display Game Board & Scoreboard --> Wait for Player Interaction**
- |
- v
- **Player Clicks Button --> Update Board State & Check Winner**
- |
- v
- **Winner Found? --> Yes --> Announce Winner & Reset Board**
- |
- **No**
- |
- v
- **Switch Turn --> Repeat Interaction Until Winner or Draw**

BLOCK DIAGRAM DETAILS

Component Interactions

- **Player Input:**

- Button clicks indicate player moves.
- Input updates the game board.

- **Game Logic:**

- GameManager checks win/draw conditions after each move.
- Determines next steps based on game state.

- **User Interface:**

- GameRenderer dynamically updates UI elements (board, scores, timer).
- Highlights winning moves with animations.

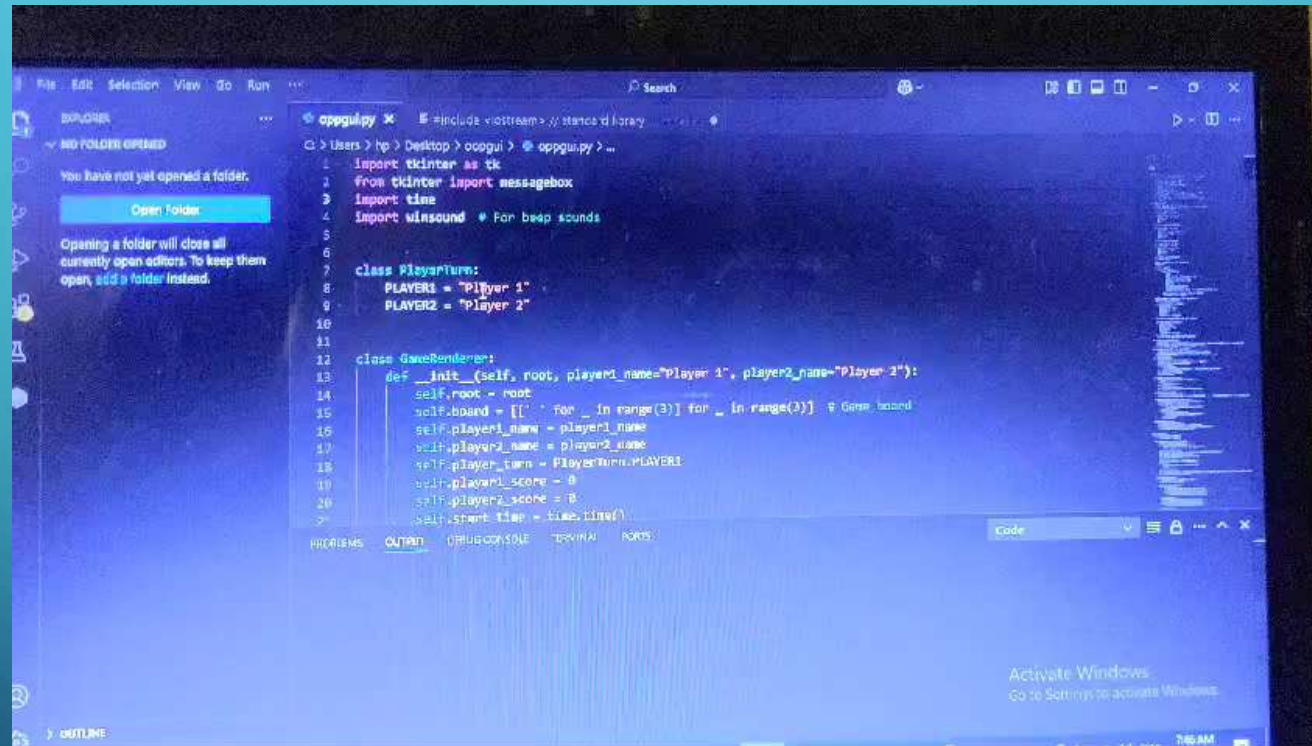
- **Feedback Loop:**

- Timer and audio feedback enhance interactivity.

GITHUB LINK

- <https://github.com/Eman-Rana/Tic-Tac-Toe-game/tree/main>

DEMO VIDEO





THANKYOU