A Mini Project Synopsis on

Tic Tac Toe Game

S.E. - I.T Engineering

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CERTIFICATE

This to certify that the Mini Project report on **Tic Tac Toe Game** has been submitted by Ashwini Nipurte(21104036), Sejal Otavkar (21104020) , Shrikant Pawar(21104086) , Chirayu Sapkale(21104027) who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **Information Technology**, during the academic year **2022-2023** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

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Chapter 1:

Introduction:

Tic Tac Toe game is a popular game. Tic-tac-toe is played on a three-by-three grid by two players, who alternately place the marks X and O in one of the nine spaces in the grid. There is no universally agreed rule as to who plays first, but in this game the convention that X plays first if first player can choose the X symbol then the second player play with O and vice versa.

Games provide a real source of enjoyment in daily life. Games also are helpful in improving the physical and mental health of human. Apart from daily life physical games, people also play computer games. These games are different than those of physical games in a sense that they do not involve much physical activity rather mental and emotional activities. Getting games to react back to the user of a game has always been long hard question for game programmers. Because, let just face it, a good game that doesn't challenge the user's ability to play the game doesn't keep the user around very long. This idea can be applied to any form of game that is out there. Board games are never fun when the opponent that he or she is playing doesn't learn or catches on. With today's computers always advancing, programmers are always looking for new ways to make a video game more interesting and challenging for the user.

Players aim to create a straight line -Horizontally, Vertically or Diagonally to win the game. The first player, who shall be designated "X", has three possible strategically distinct positions to mark during the first turn. Superficially, it might seem that there are nine possible positions, corresponding to the nine squares in the grid. However, by rotating the board, we will find that, in the first turn, every corner mark is strategically equivalent to every other corner mark.

Purpose:

We create a 3x3 grid tic-tac-toe game. The system is designed so that two players can play a game of tic-tac-toe using LabVIEW software. The program will contain a display function and a select function to place the symbol as well as toggle between the symbols allowing each player a turn to play the game. The program will update after each player makes their move and will check for the conditions of the game as it goes on.

Objectives:

- The objective of this tic tac toe game python project is to build a tic tac toe game so you can play it without wasting paper and improve your concentration.
- This game is very popular game and it's fairly simple by it self.it is actually a two-player game we implement here playing with single player another is computer.
- To be designed with the aim of providing a user-friendly, intuitive experience for all users, regardless of their level of technical knowledge.
- To have an attractive, user friendly and Secure Login page.

Scope of the project:

Tic-Tac-Toe is not just a fun game, but a fun game that can teach many things to people of all ages. As you'll see, playing Tic-Tac-Toe is highly beneficial to most people. It doesn't matter how old you are or who you are playing against.

- If you want to play a game that the youngest and oldest can both the enjoy,
- Playing this game user/player to start thinking strategically, which can be highly beneficial in other areas of life too.
- This game is fun, easy, and a great way to make a strong bond as a group or family.
- introduce basic problem-solving skills to young children, playing Tic-Tac-Toe is a great option.
- Stress is a killer, for starters, socializing and playing games are great stress relievers.
- Tic-Tac-Toe is an easy to learn and-play game that can help boost self-confidence quickly.

Chapter 2:

Problem Definition:

Once a winning condition is reached, no more moves are allowed. You will build an application that allows a person to play tic-tac-toe against the computer. Your application will print out the board, have the computer select a spot, and ask the user to select a spot. This will continue until the game ends Your application will do limited error checking to ensure occupied spots won't be overwritten with new values. Finally, the board does not need to be 3x3. Your solution needs to be able to handle any square (3x3) board. The parameter for board size is passed in the constructor.

Problem solution:

Winning at Tic-Tac-Toe requires problem-solving. A player must solve the problem of where to put their mark to avoid losing. If you are trying to incorporate some mental stimulation in an older adult's life or introduce basic problem-solving skills to young children, playing Tic-Tac-Toe is a great option.

Chapter 3:

Proposed system:

- The game is played between two players each player of whom selected their respective symbols to make.
- Player, one starts the game by placing his symbol in any of the nine squares.
- Player two marks the turn by placing his or her symbol in the empty square.
- each player makes their turn alternatively.

Features / Functionality

- In tic tac toe game, each player will symbolize with unique color mark.
- After completing the game here is the display the who win the game and also, it's display to tie the game.
- It's showing the who many matches

Chapter 4:

Project outcomes:

- In actuality, tic-tac-toe players fill in each of the nine entries with one of only three values.
- User can access the features are provided to ease their task.
- The project should have a secure login.

Chapter 5

Software Requirements

Python- to build this game we use tkinter module for create GUI.
Pycharm- to provide smart code compilation.

Chapter 6:

Project Design:

The Following are the snapshots of the GUI of the project:

<u>Fig 1.1 Home page (login page)</u>

Here the user can choose to register if he is new to the system or else login using the credentials.
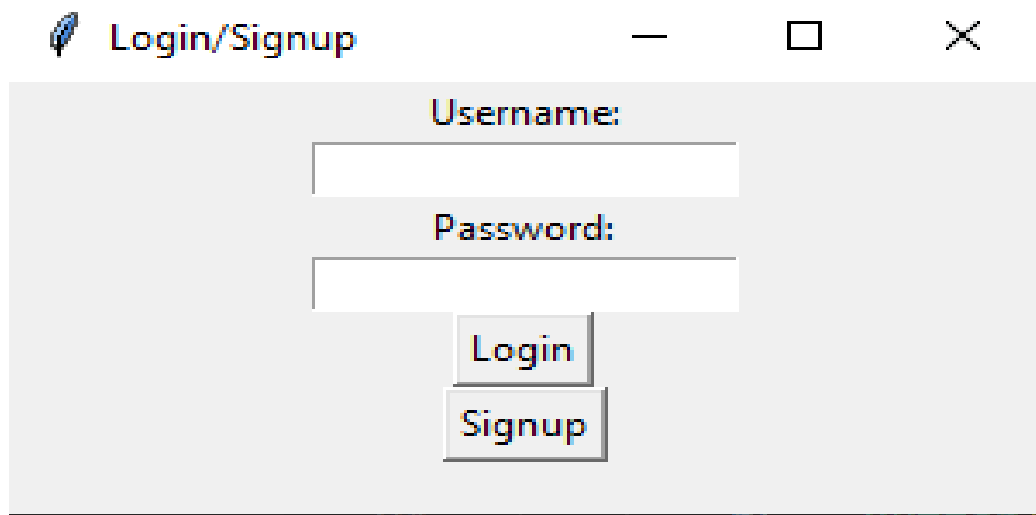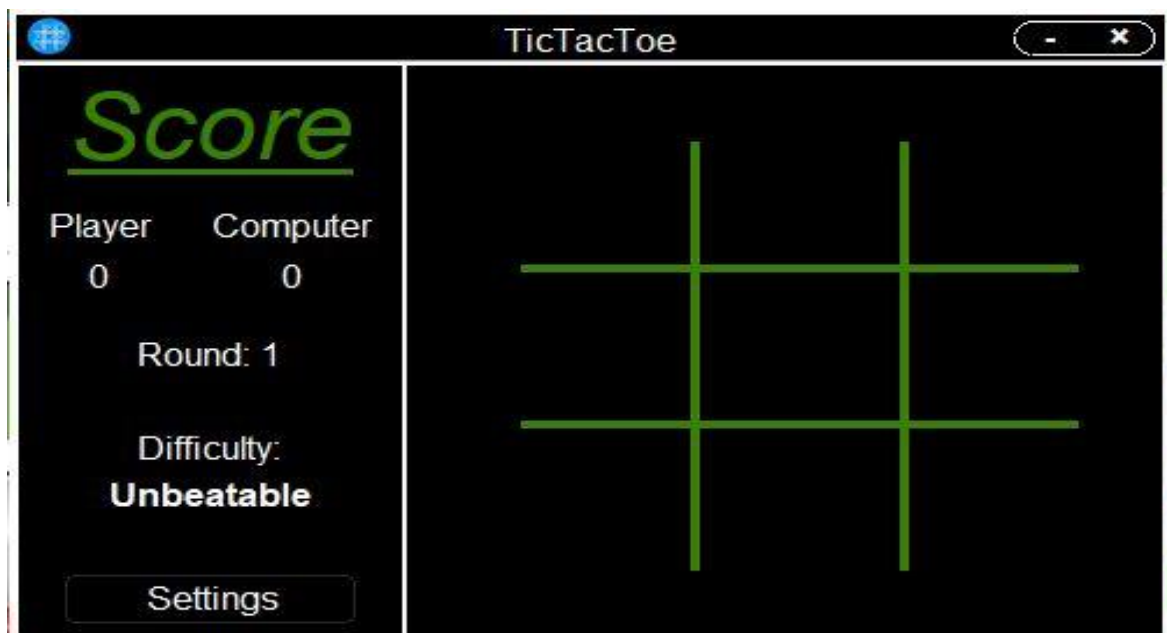
Fig 1.2 Game starting Page
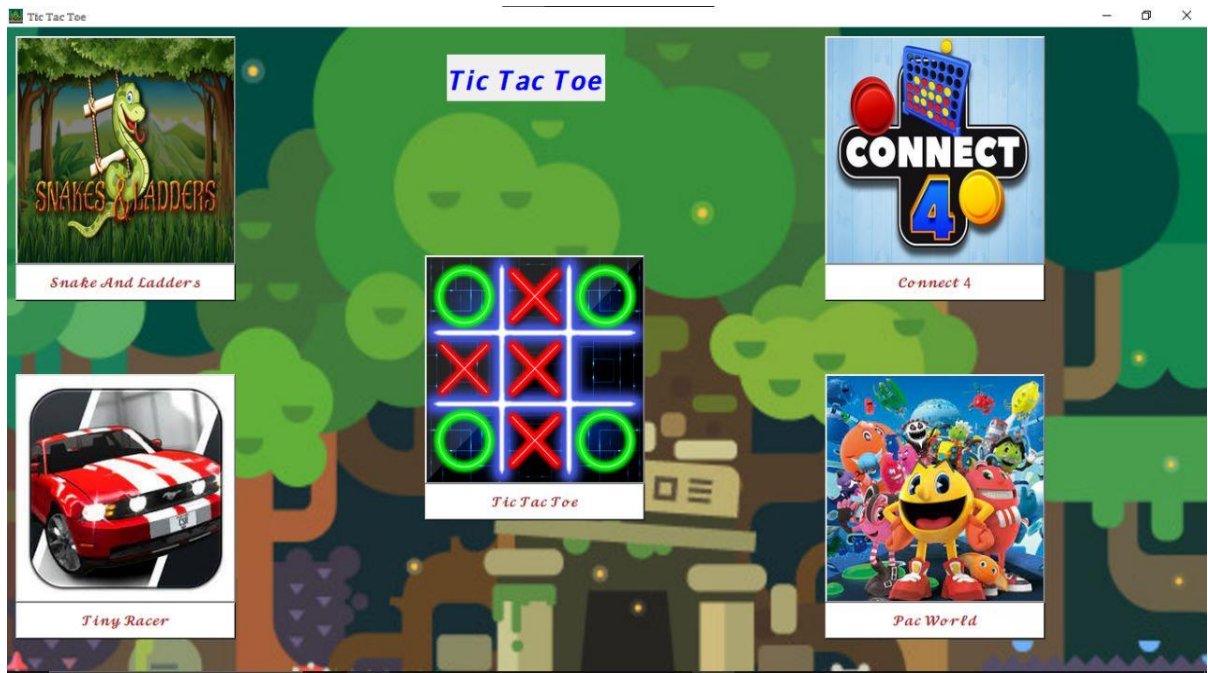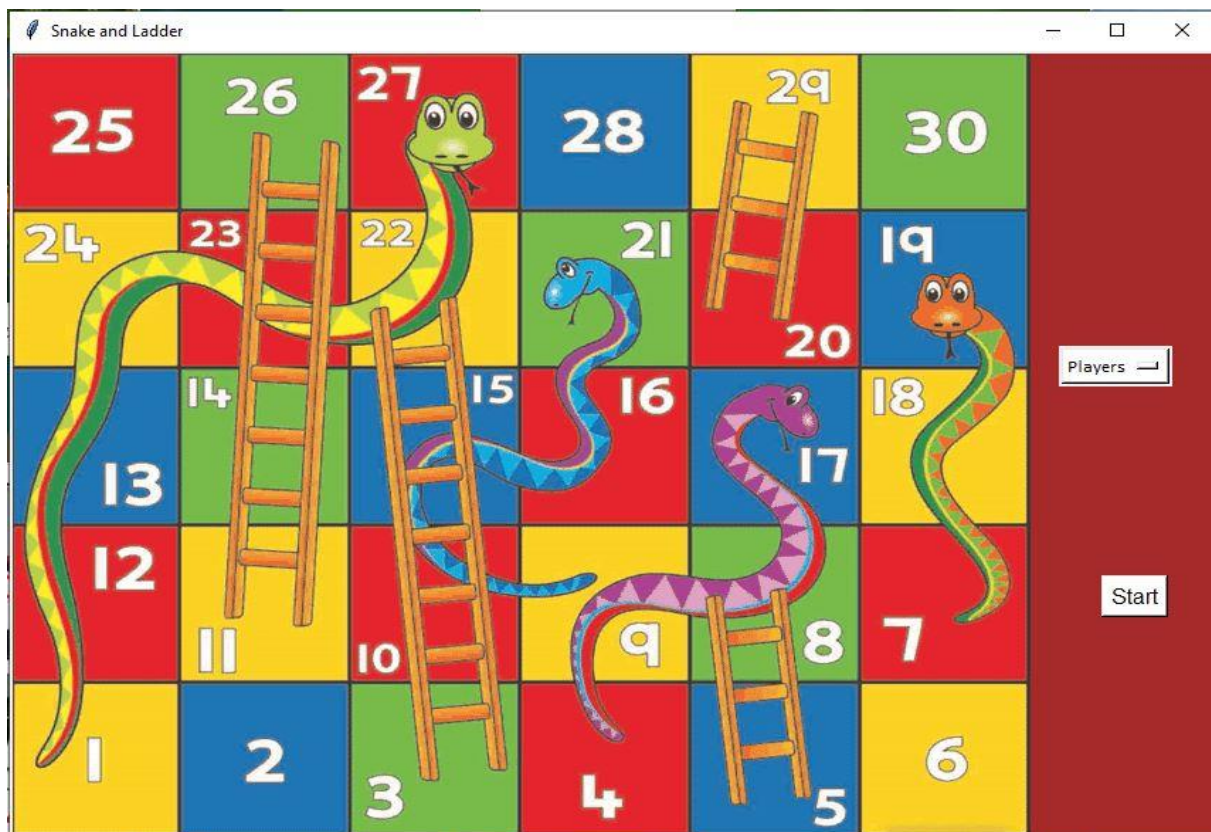

Fig 1.3

TIC TAC TOE

Fig 1.4

Snake & Ladder

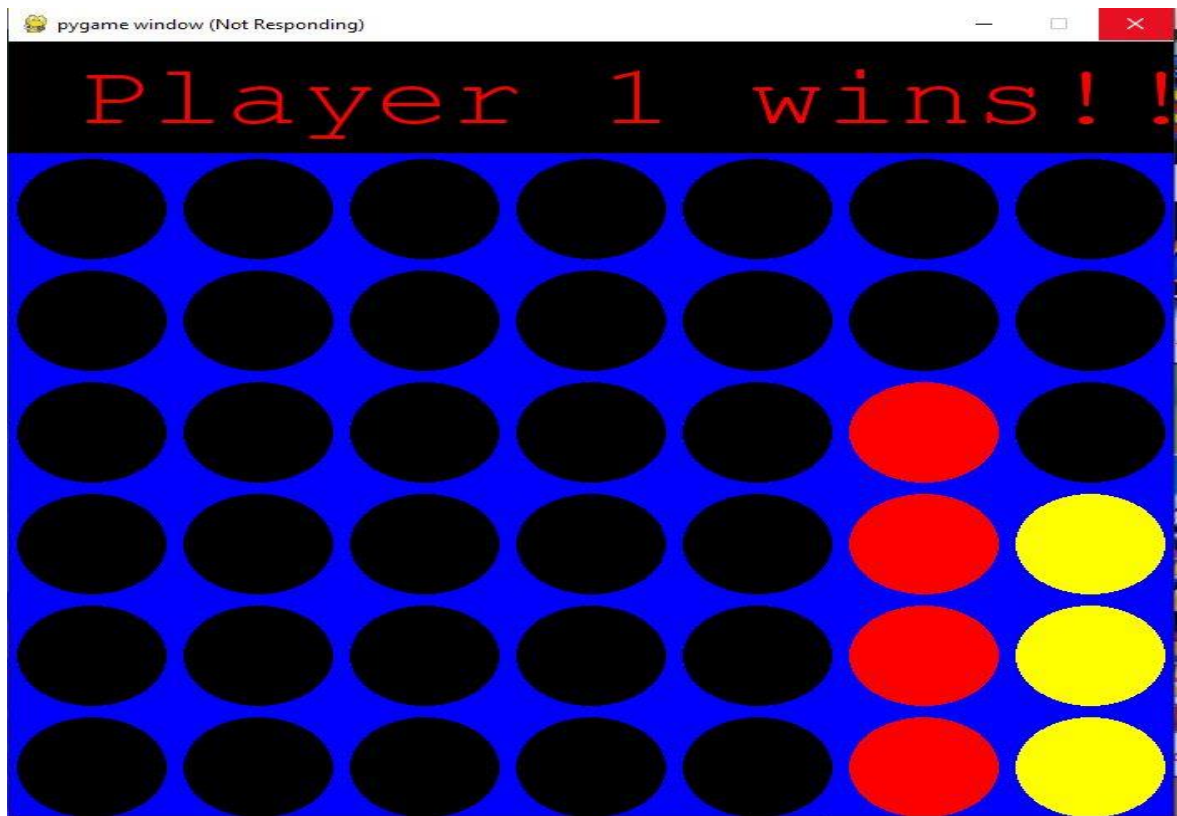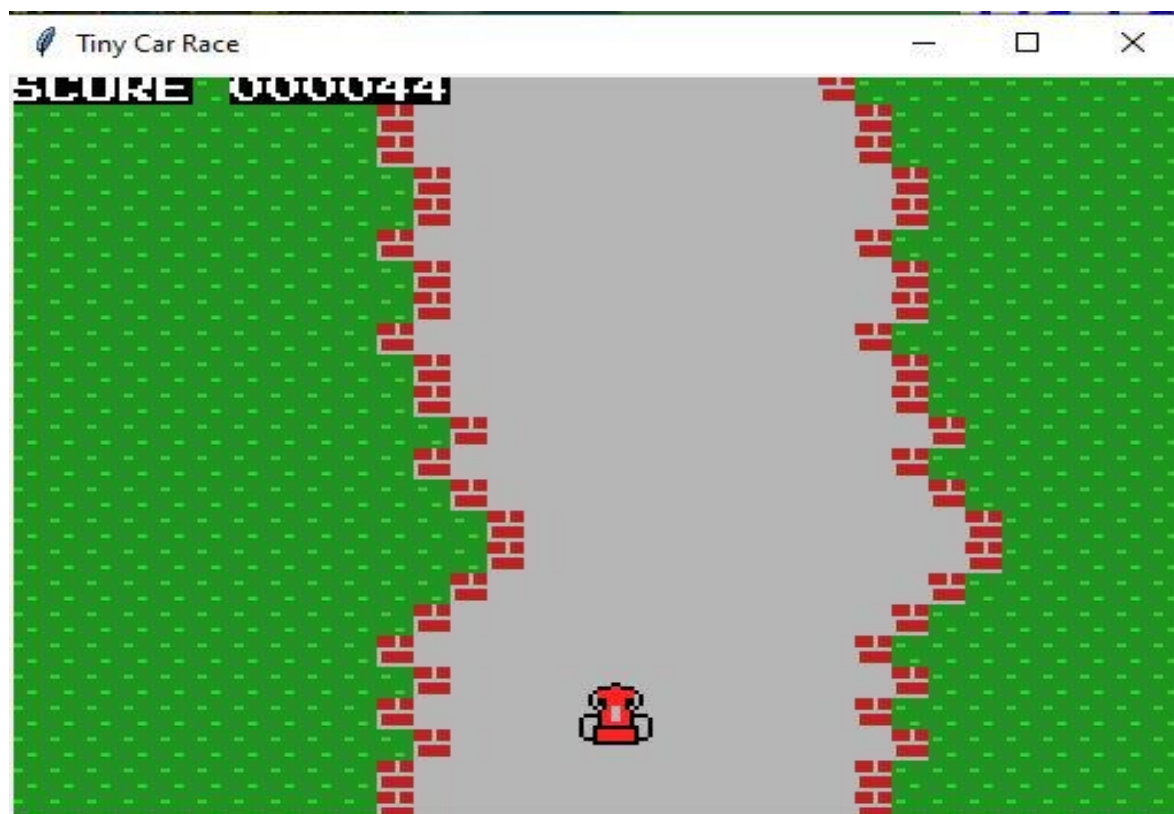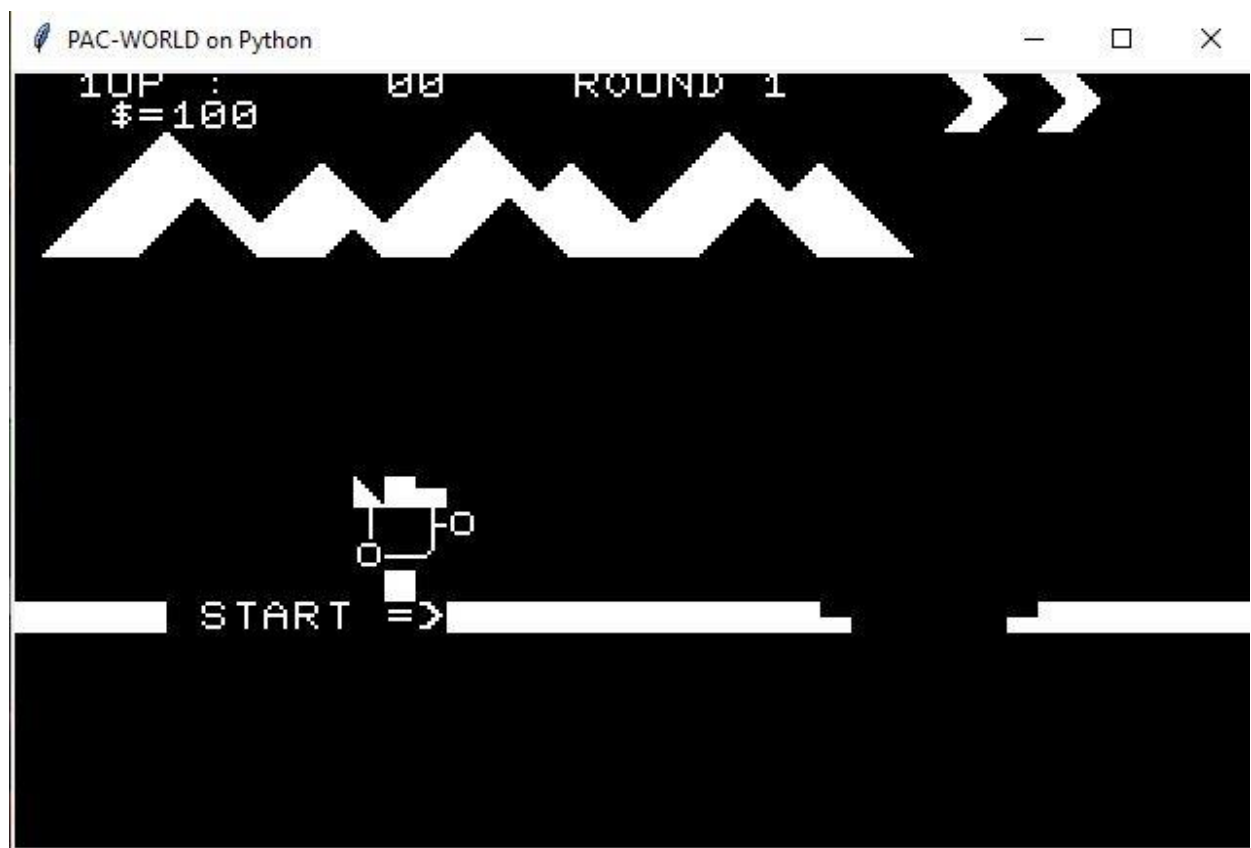Fig 1.5

Connect 4 Points

Fig 1.5

Tiny car race

Fig 1.6

PAC –WORLD

Chapter 7:

Conclusion:

The Tic Tac Toe game is most familiar among all the age groups. Intelligence can be a property of any purpose – driven decision maker. This basic idea has been suggested many times. An algorithm of playing Tic Tac Toe has been presented and tested that works is efficient way. Overall, the system works without any bugs.

Throughout this step-by-step project, you've created a classic tic-tac-toe computer game using Python and Tkinter. This GUI framework is available in the Python standard library. So your game will work great.

References:

- Python: the complete reference -martin C. brown.
- Core python programming -Dr. R. Nageswara Rao.
- www.studytonight.com
- www.realpython.com