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Project Outline

1. **Title Page**
   1.1 Game Name

   Tic-Tac-Toe (also called Noughts and Crosses)

2. Game Overview
   2.1 Game Concept (Description)

   For several years, Tic-Tac-Toe has been played on a piece of paper in which two players write either O or X in a pattern of nine squares. It is won by the first player who places three Os or three Xs in a straight line. With the advent of fast-paced technology and innovation, an online version of this game become possible. It is now a game where two players take turns on completing a column, row or diagonal with either three X's or three O's that is drawn in the spaces of a grid of 9 squares. This game can be played by two human players but it can also be played by one human player against a simple Artificial Intelligence.

   2.2 Programming Language

   Python is a superb programming language in rapid game development. It is an interpreted, object-oriented programming language similar to PERL which is well-renowned because of its clear syntax and readability. Python is said to be relatively easy to learn and portable, meaning its statements can be interpreted in various operating systems. Python was created by Guido van Rossum, who came from Netherlands and whose favorite comedy group at the time was Monty Python's Flying Circus. The source code is freely available and open for modification and reuse. Python has a significant number of users around the world which ranges from web developers, to database analysts.

   According to Mcgugan, "When I discovered Python, it lowered a number of barriers to writing software, because I could work faster and accomplish more with less effort, and when combined with Pygame I could experiment with game ideas and build a complete game from scratch in record time."

   2.3 Target Audience

   The game is accessible and can be played by users regardless of age and gender and educational status as long as you have the might and determination to win and enjoy the game. It can be played anytime and anywhere as long as you have the game application. This game is basically for two players however you can also play against an artificial intelligence which is as challenging as humans.

2.4 Game Flow Summary

The simple interface shows 9 different blank cells of a 3x3 box. Each player takes turn in determining which cell the X/O has to be put. There are 8 different ways on winning the game; 3 for the horizontal, 3 on the vertical and 2 for the diagonal. Players can also have a draw match if no consecutive X's/O's had been placed.

3. Gameplay
3.1 Gameplay
3.1.1 Mission/Challenge Structure

This game is played to jog the player's mental strength. They are expected to determine what their opponent's possible attack/move would be. It also has three major benefits for the mind:

1. It makes the mind sharper;
2. Increases concentration level; and
3. Helps with visual skills

Tic-tac-toe is also a strategical game, which enhances the flow of thought, especially for children who play this game.

3.1.2 Objectives

For the player to beat the opponent by placing three marks in a row/column/diagonal. A draw match means none of the players were successful in doing such task.

3.1.3 Play Flow

Each player will pick a cell where to put their X or O's. three consecutive marks should be seen to win, and if not, the game calls it a draw. Then the player take turns making moves. The boxes on the left side of the flow chart are what happens during the player's turn. The right side shows what happens on the computer's turn. After the player or computer makes a move, the program checks if they won or caused a tie, and then the game switches turns. After the game is over, the program asks the player if they want to play again.