## horizontal line



Tic-Tac-Toe

28.01.2024

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| --- | --- |
| Team Members | Assigned Roles |
| Abinav Harsha | Project lead |
| Y S Pradyumna | Associate lead |

# Overview

The Tic-Tac-Toe game is a console-based application developed in Python. It provides two modes of play: 1) Against the Program (computer), and 2) Against a Friend. Players can choose to play against the computer or challenge a friend in a classic Tic-Tac-Toe duel. The game incorporates a coin flip mechanism to decide who goes first, adding an element of randomness and fairness.

# Goals

1. Implement a coin flip to determine the starting player, creating a fair and engaging experience.
2. Develop the core game logic for both single-player (against the computer) and two-player modes.
3. Enhance the user experience with clear prompts, messages, and visual representations of the game board.

# Specifications

|  |  |
| --- | --- |
| Team Member | Task Assigned |
| Abinav Harsha | ● Designing the code  ● Adding the feature of coin flip  ● Documentation |
| Y S Pradyumna | ● Designing the code  ● Testing the code with all possible situation  ● Modifying the code to make it error free |

**DEADLINE FOR PROJECT COMPLETION:** 24th January, 2024

# Milestones

## Coin Flip Mechanism

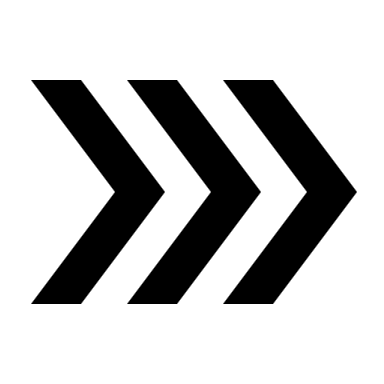
* Implement a coin flip to determine the starting player, providing an element of randomness.

## User Input and Mode Selection

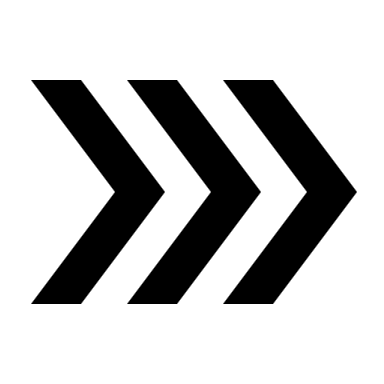
* Allow users to input their names and choose between playing against the computer or a friend.

**Timeline**

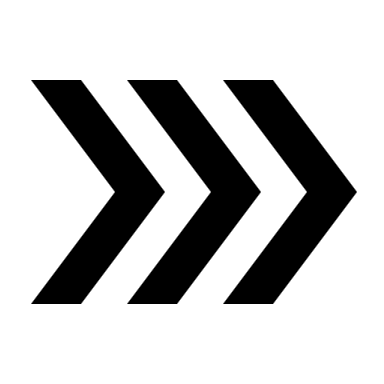
**23nd Jan – Come up with an idea**



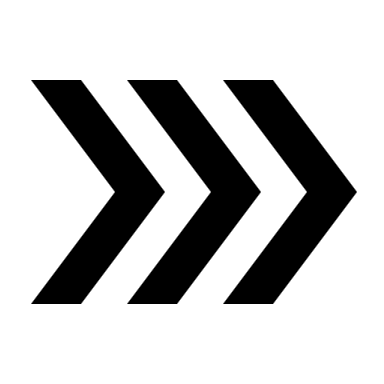
**24th Jan – Develop the core and game logic**



**25th Jan – Implementing single player mode**



**26th Jan –Testing and Refinement**



**30th Jan - Documentation**

**Challenges Faced:**

* Ensuring robust input validation to handle various scenarios and prevent unexpected errors.
* Incorporating the coin flip mechanism seamlessly into the user interface and game flow.

Learning Outcomes:

* **Programming Logic:**
  + Implementing the main game loop, conditional statements, and loops to control the game's flow.
* **User Input Handling:**
  + Handle user input effectively, including input validation to ensure the program can handle a variety of scenarios

# Future Scope:

* + Transform the game into a graphical user interface (GUI) for a more visually appealing and interactive interface.
  + Expand the game to support online multiplayer or local multiplayer on different devices.
  + Implement a scoring system to track and display players' overall performance and achievements.
  + Allow users to customize game settings, such as board size, symbols, and themes.