

# Tic-Tac-Toe, Portfolio 2

## Opening Menu

As a tic-tac-toe player, when I start the program...

- I should see an opening menu asking if I want to play “regular” or “battle” tic-tac-toe.
- If I select the “regular” option, then the program should start a game of tic-tac-toe, as per portfolio one. The game should still have all of the features that we implemented in portfolio one.
- If I select the “battle” option, then the program should prompt me for additional choices and then start a game of “battle” tic-tac-toe, as outlined below.

## Battle Tic-Tac-Toe Options

As a tic-tac-toe player, when I select a game of “battle” tic-tac-toe...

- The program should ask each player what mark they want to use.
  - Players can only choose a mark that is one character long.
  - At a minimum, the game needs to accept the characters A – Z, a – z, ?, !, \*, ~, \$, %, and #.
  - The program should ask the player for a character repeatedly until the player enters a valid choice.
- The program should ask each player which archetype they want to use.
  - Players can select the same archetype or different archetypes.
  - The choices are “Paladin”, “Alchemist”, and “Chronomage” (outlined below).
  - The program should ask each player for an archetype repeatedly until the player enters a valid choice.
- The program should then start a 3x3 game of tic-tac-toe. The game proceeds with all of the normal rules of tic-tac-toe, except each archetype gets a special ability that can be used within the course of the game.

# Archetype Abilities

## Alchemist

An alchemist is a potions master with arcane knowledge of transfiguration. If a player chooses the Alchemist archetype, on their turn they can either make a regular tic-tac-toe move or swap two marks on the board.

- On my turn, I should see a nicely formatted menu that allows me to select if I want to make a regular move or if I want to swap marks. Additionally, it should prompt me for which marks I want to swap.
- The marks do not have to be adjacent.
- A player can activate this power once per turn and as many times as they want in the game.
- A player cannot make a move AND swap marks in the same turn – they must do one or the other.
- The game should stop me if I try to swap two marks of the same type since that would be pointless.
- The game should stop me if I try to make an invalid special move (e.g. I should not be able to swap marks on turns one or two since there would be zero or one marks currently on the board).

## Paladin

The Paladin is a stalwart guard that can force others around the battlefield. If a player chooses the Paladin archetype, on their turn they can either make a regular tic-tac-toe move or shift one existing mark to an adjacent square.

- There should be a nice menu that allows me to select if I want to make a regular move or a special move. If I choose special move, the program should ask me which mark I want to shift and where.
- A player can shift either their own mark or an opponent's mark
- They must shift the mark to an adjacent square. For example, you can move a mark at space 1 to spaces 2, 4, or 5. You cannot move that mark to spaces 3, 6, 7, 8, or 9.
- A player must shift the mark to an unoccupied square.
- You do not have to “wrap” squares around the board. In other words, you do not have to worry about a player pushing a mark at cell 1 “upwards” or “left”.
- A player can activate this power once per turn and as many times as they want in the game.

- A player cannot make a move AND shift a mark in the same turn – they must do one or the other.
- The game should stop me if I try to make an invalid special move (e.g. I should not be able to shift a mark on turn one since there are no marks on the board).

## After Finishing a Game

As a tic-tac-toe player, when I complete a game of “regular” or “battle” tic-tac-toe...

- I should see a closing menu asking if I want to play again.
- If I select no, the program should exit gracefully.
- If I select yes, the program should start from scratch and prompt me which type of game of tic-tac-toe I want to play. If it is a new game of “battle” tic-tac-toe, each player should be able to select a new archetype.

## Unneeded Options

Some of the features that are NOT needed for portfolio two are:

- Computer players
- Custom marks in “regular” tic-tac-toe