Tic Tac Toe

# **Planning**

## Rules:

* Choose a symbol, ‘O’, or ‘X’.
* Take turns to place your symbol on the grid.
* The first player to get a horizontal, diagonal or vertical line of 3 symbols, wins.

## Data structure:

Grid location will use a list, from 1-9 (0-8 index)

* List will be called ‘board’

Constants:

* playersymbol (the symbol the player will use)
* compsymbol (the symbol the computer uses)

Variables:

* whofirst (it will either be ‘player’ or ‘computer’)
* symlocat (number from 1-9 for 3x3 grid)

## Flowchart

## Test plan:

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Num** | **Description of Test** | **Test data** | **Expected outcome** |
| 1 | Enter ‘x’ as an input | valid | It accepts the ‘x’ as an input |
| 2 | Enter ‘X’ as an input | valid | It accepts the ‘X’ as an input |
| 3 | Enter ‘o’ as an input | valid | It accepts the ‘o’ as an input |
| 4 | Enter O’ as an input | valid | It accepts the ‘O’ as an input |
| 5 | Enter ‘e’ (or any other character) as an input | invalid | It does not accept the ‘e’ (or any other character) as an input |
| 6 | The game should end when the player wins | valid | The game prints ‘you win’ when the player makes a winning move |
| 7 | The game should end when the computer wins. | valid | The game prints ‘you lose’ when the computer makes a winning move. |