Group A- Tic Tac Toe Forever

Test Plans

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Table of Contents

Phases of Testing: 3
Unit testing 3
Testing UI: 3
Peer Review: 3
Integration Testing: 3
Regression testing: 4
System Testing: 4
Black box testing: 4
Testing Stakeholders: 4
Error Reporting and Defect Removal Techniques: 5
Testing Schedule: 5
Hardware Requirements: 5
Software Requirements: 6
Installation Instructions: 6
Playing Instructions: 10

Phases of Testing:

Unit testing (White Box Testing):

Here each method is tested independently using Visual Studio 2010 using visual studio test suite. The complete test cases are available as a separate project and as part of Tic-Tac-Toe Forever project.

In unit testing we have followed the below structural testing techniques

- Statement Testing
- Block Testing

Testing UI:

Using visual studio test suite cannot test the UI functions and its related events. We are playing the actual game and through screenshots we compare the actual and the expected results. A User interface testing document is given separately.

Peer Review:

We have also followed a peer review technique where the developer have reviewed the code of other developer to verify the coding standards and the coding techniques.

Integration Testing:

Here we test a group of methods together that have been unit tested. We group modules into components which perform a sequence of actions. The modules with their expected results are explained below.

1) Game Load – The welcome screen with the start and the instruction button is displayed.
2) Instruction screen – This screen displays with the instructions of the game.
3) Game Start- This displays the initial grid of size 25* 25 .
4) Play- The user's coin should be displayed at the position clicked and the countermove should be made. The board should be resized when clicked at the boundary. The winning criteria should be checked after each move.
5) Restart- A new grid of size 25*25 will be displayed.
6) Exit- The game will be closed.

Regression testing:

During integration testing in case any bugs are found the following steps will be performed

1) Code fix will be done
2) Unit testing will be all the methods.
3) Integration testing for the module which had bug will be done again.

System Testing:

Here the whole system is tested and the steps followed are

1) The exe file is downloaded in a system having .Net framework 4.0 installed .(No Visual studio installed)
2) The whole game is played visiting all the screens and clicking on all the buttons and playing the game. The game should behave as per the requirements

Black box testing:

This is done to ensure that all the requirements are met. The black box testing and its results are given as a separate document.

Testing Stakeholders:

Unit testing – Praveen Kumar Senathi , Sai Karthik

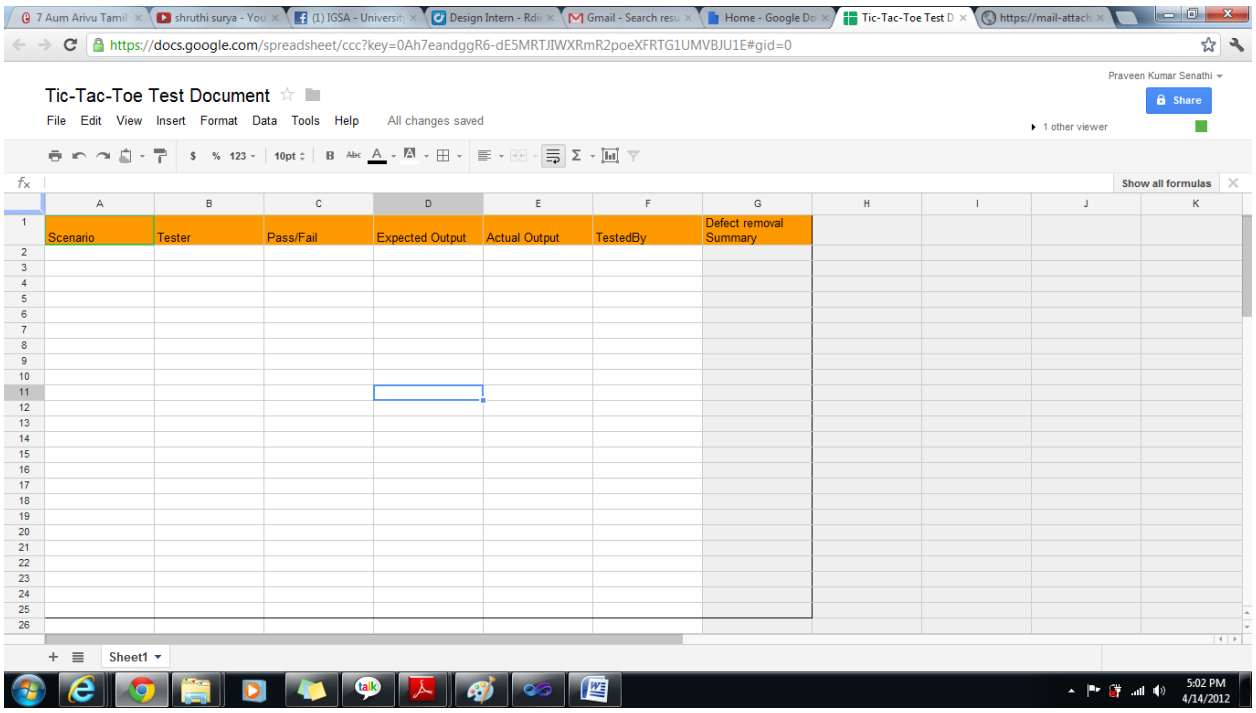
UI Testing (Part of Unit testing for UI)- Dharmesh, Shabarish

Integration Testing- Praveen Kumar Senathi , Sai Karthik

System Testing- Dharmesh, Shabarish

Error Reporting and Defect Removal Techniques:

We will be using the following shared document for Integration testing and System testing for error reporting and defect removal.



Testing Schedule:

April 13-10 Unit Testing

April 11-14 UI Testing

April 15-20 Integration testing

April 21-22 System Testing

In case of bugs regression testing is done using the above mentioned steps.

Hardware Requirements:

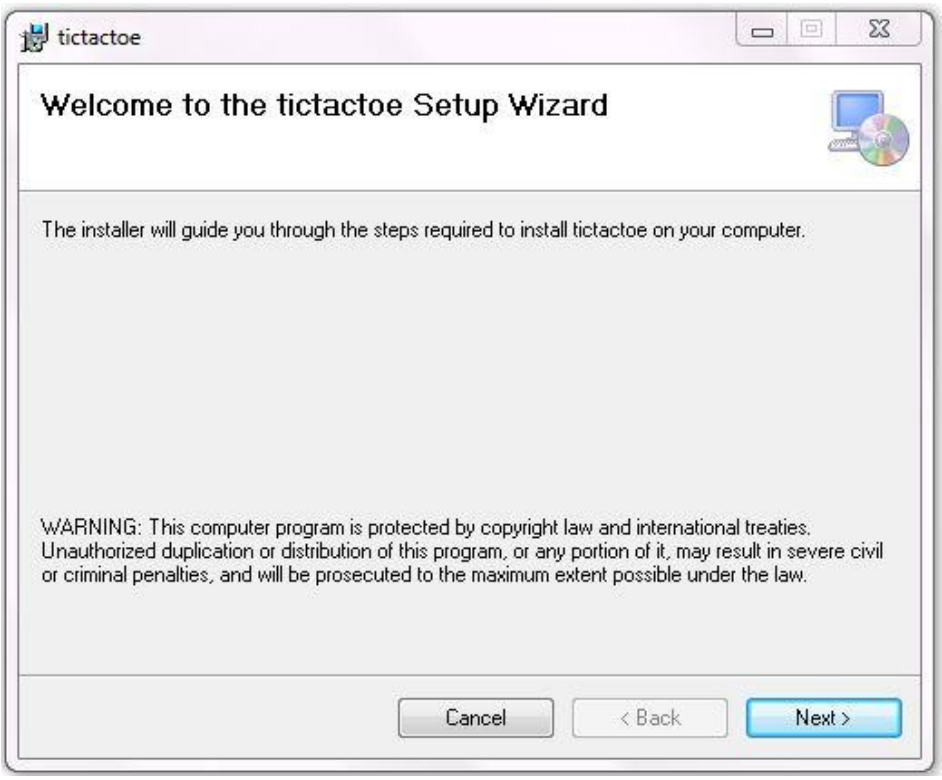
- A computer with a 400MHz processing speed
- 128 MB of RAM
- SVGA Monitor with a minimum resolution of 800 x 600 and a Mouse.

Software Requirements:

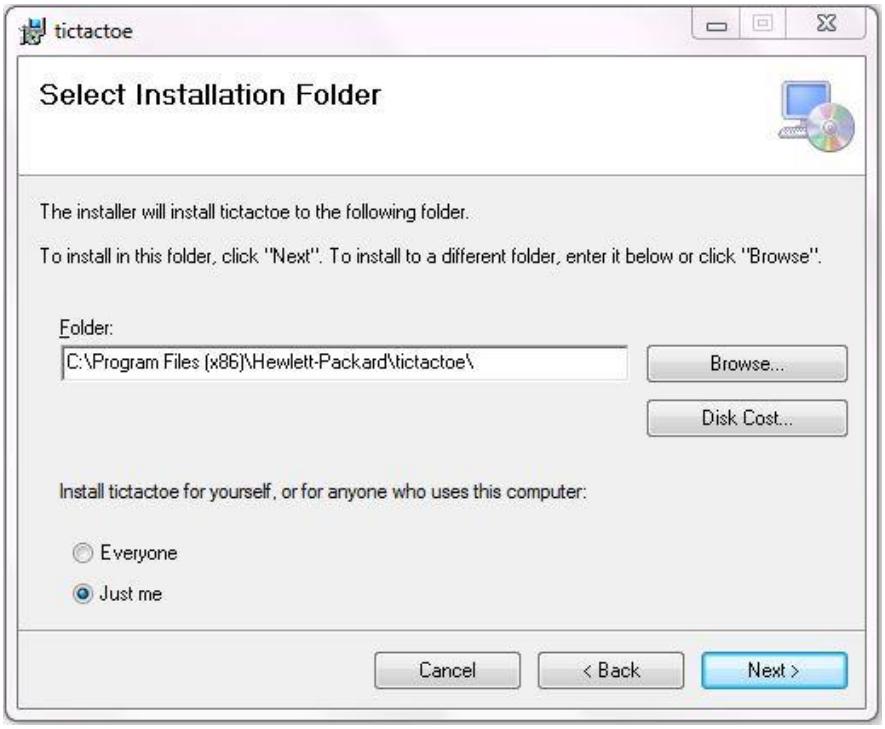
- Windows XP 32bit or 64bit, Windows Vista 32bit or 64bit, Windows 7 32bit/64bit
- .NET framework 4.0 should be pre installed for windows XP for Windows 7 and Windows vista it is included.

Installation Instructions:

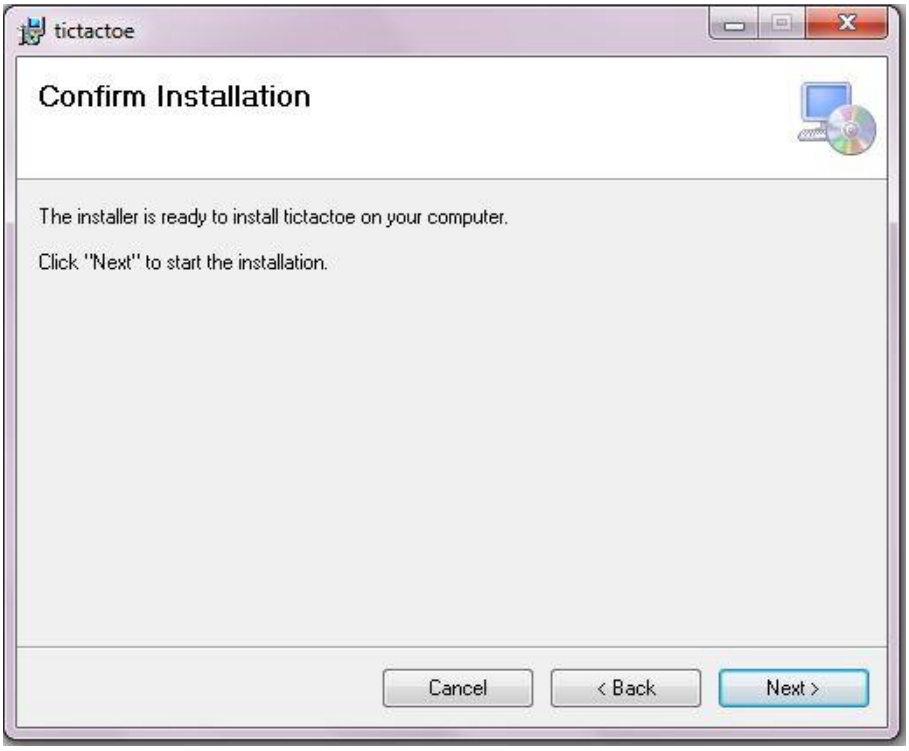
1) Right click on TICTACTOE msi package and click on run a welcome window to set up the game appears as shown below.



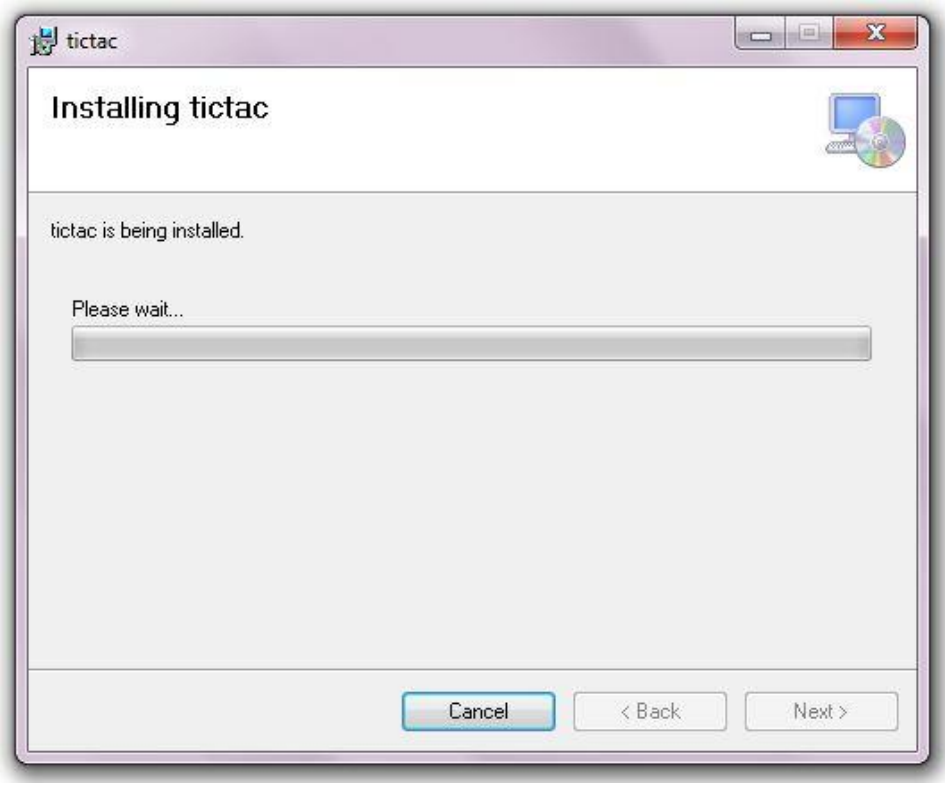
2) Click on ‘Next’ to start the set up. A default path for the folder which consists of the game will appear. If you want to change the path of the folder you can browse for the require path.



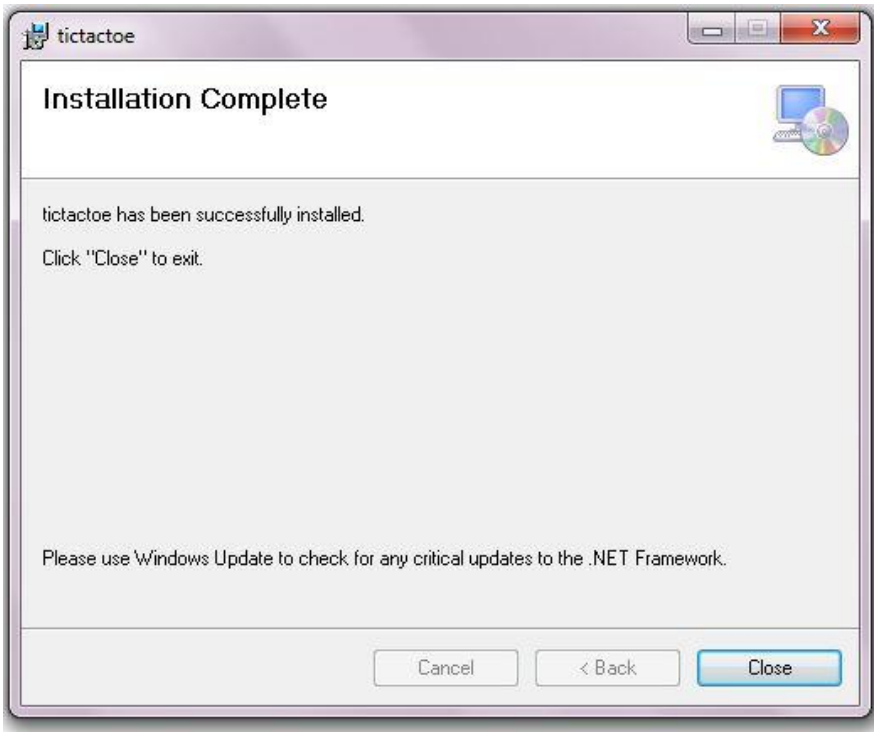
3) Click on Next to continue the set up process. A window for the confirmation of process appears as shown below.



4) Click on ‘Next’ to confirm the installation. Once done a window that shows the installation status appears as shown below.



5) Once the installation process is complete click on ‘Next’ to complete the installation. A window which shows that installation process is complete appears as shown below.

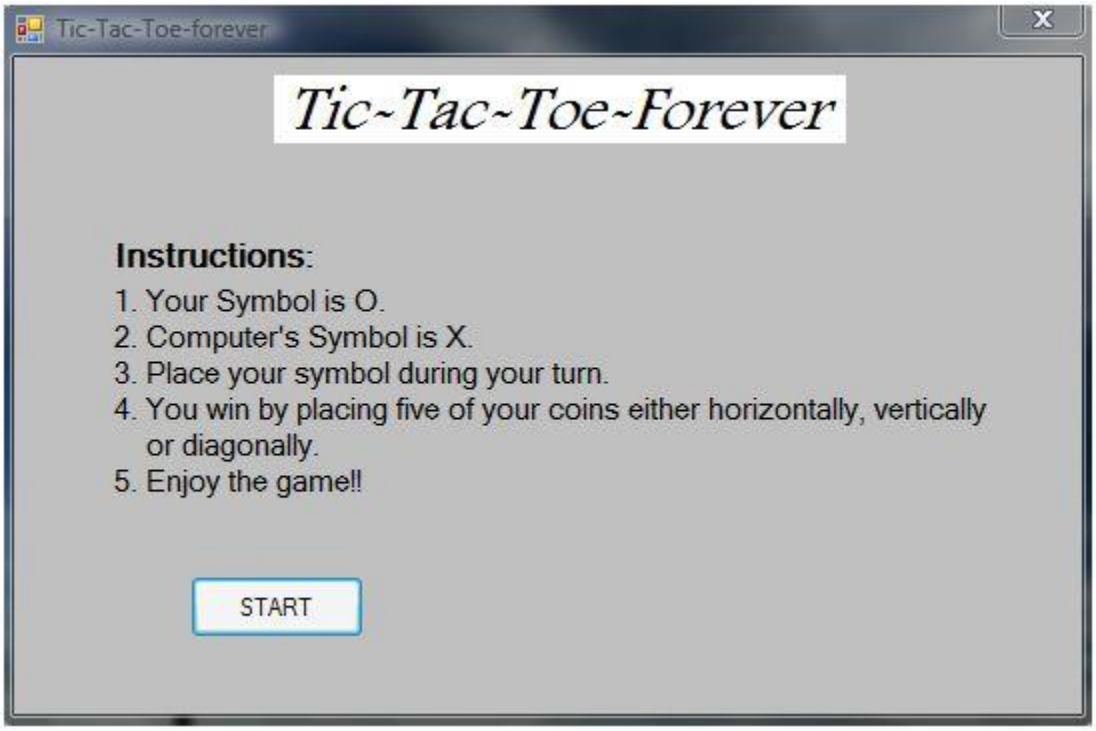


6) Click on ‘close’ to complete the installation of the game.

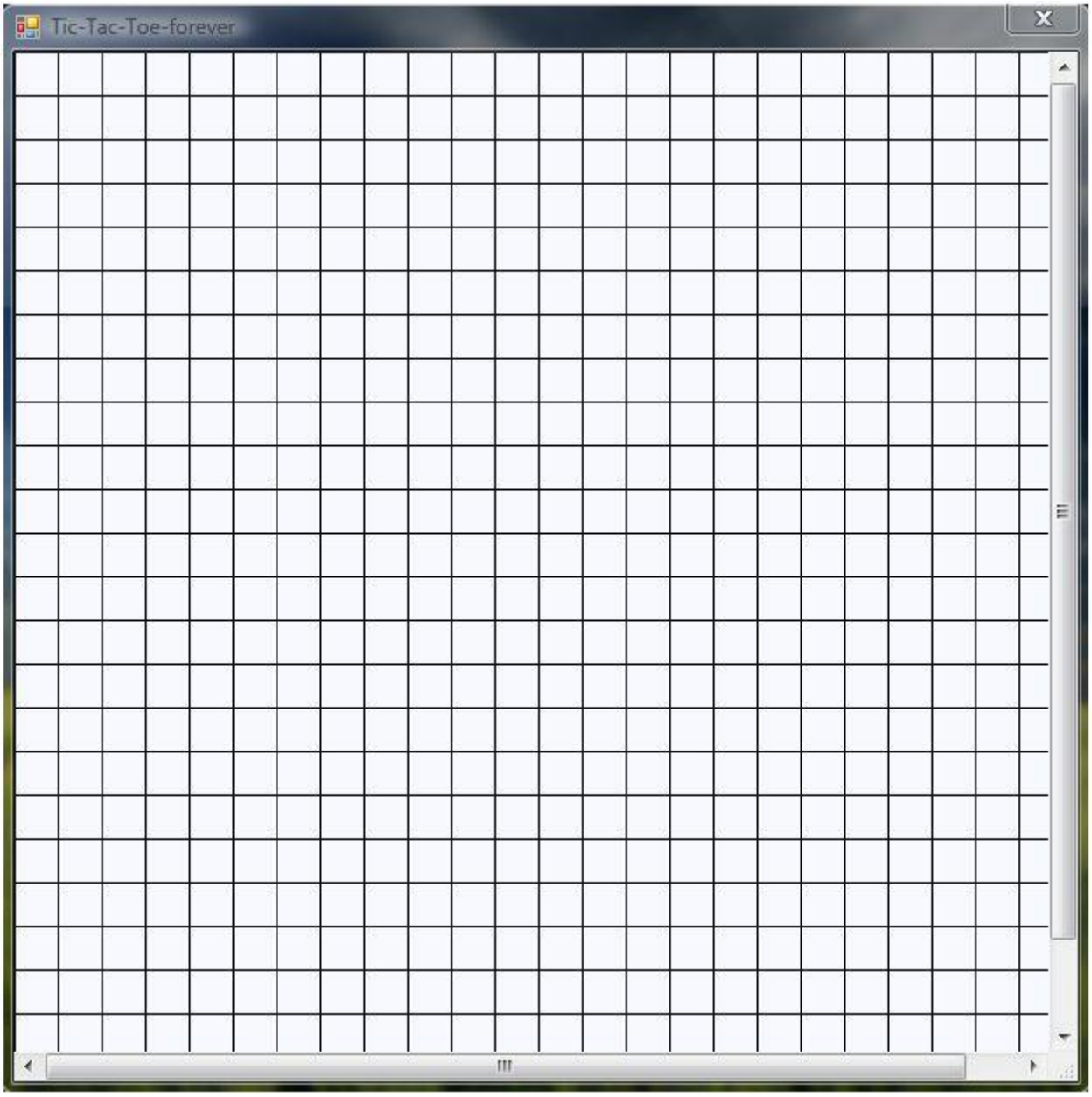
Playing Instructions:

1) Once you set up the game click on the game icon it displays the game first screen as shown below.

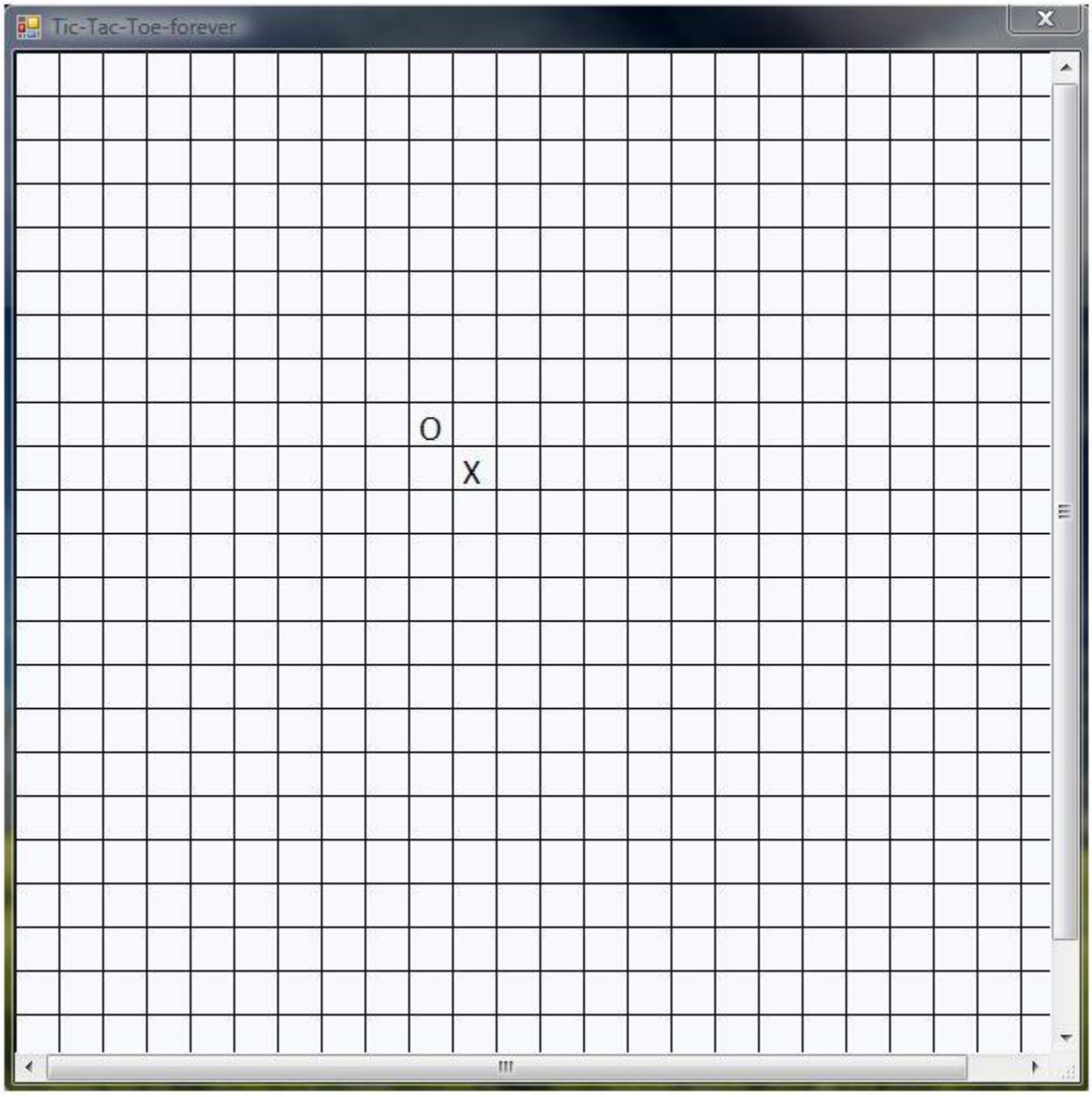
2) On the click of the button INSTRUCTIONS the instructions on how to play the game are displayed as shown below.



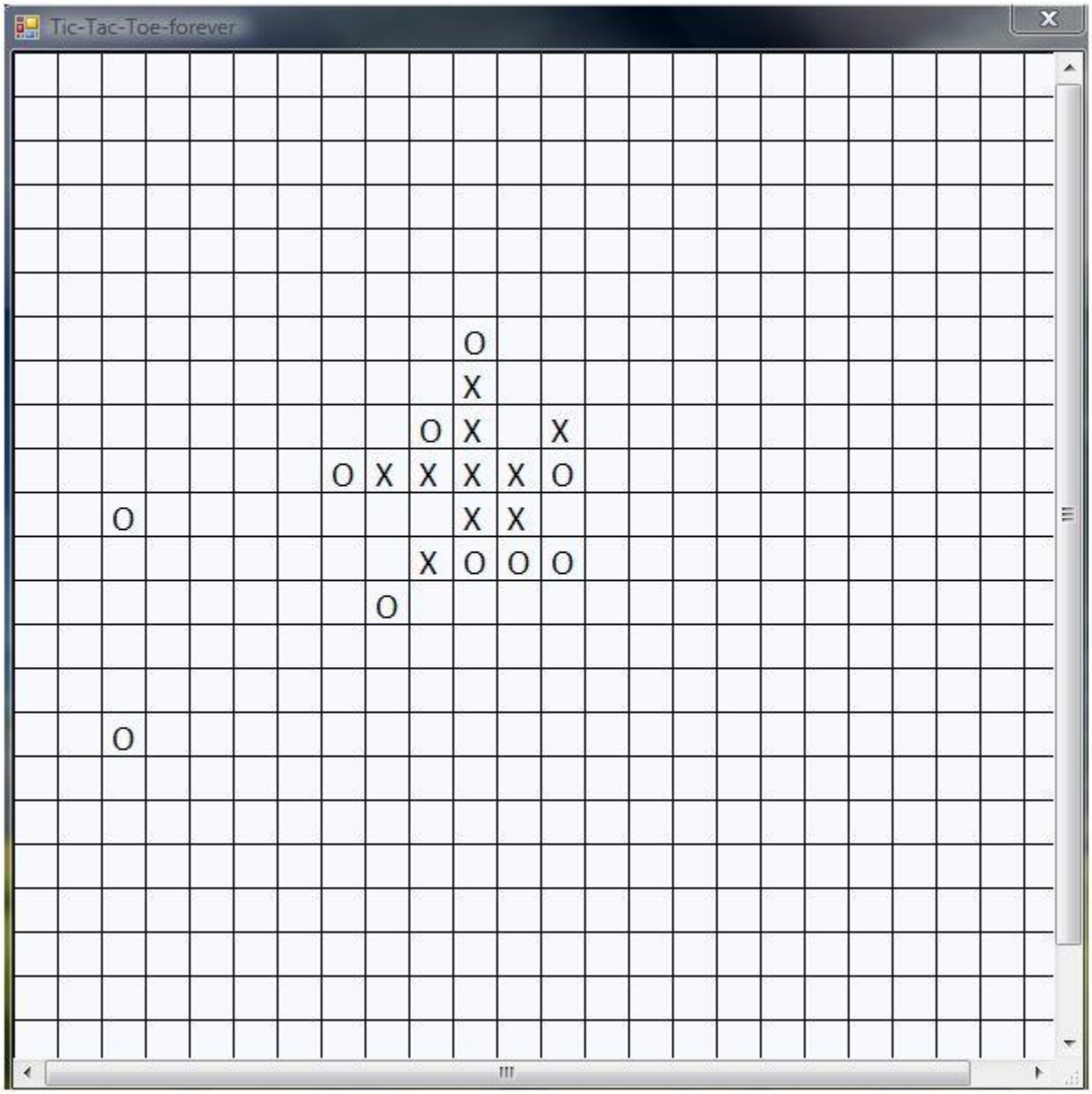
3) On the click of the START button the Grid to play the game will be displayed as shown below.



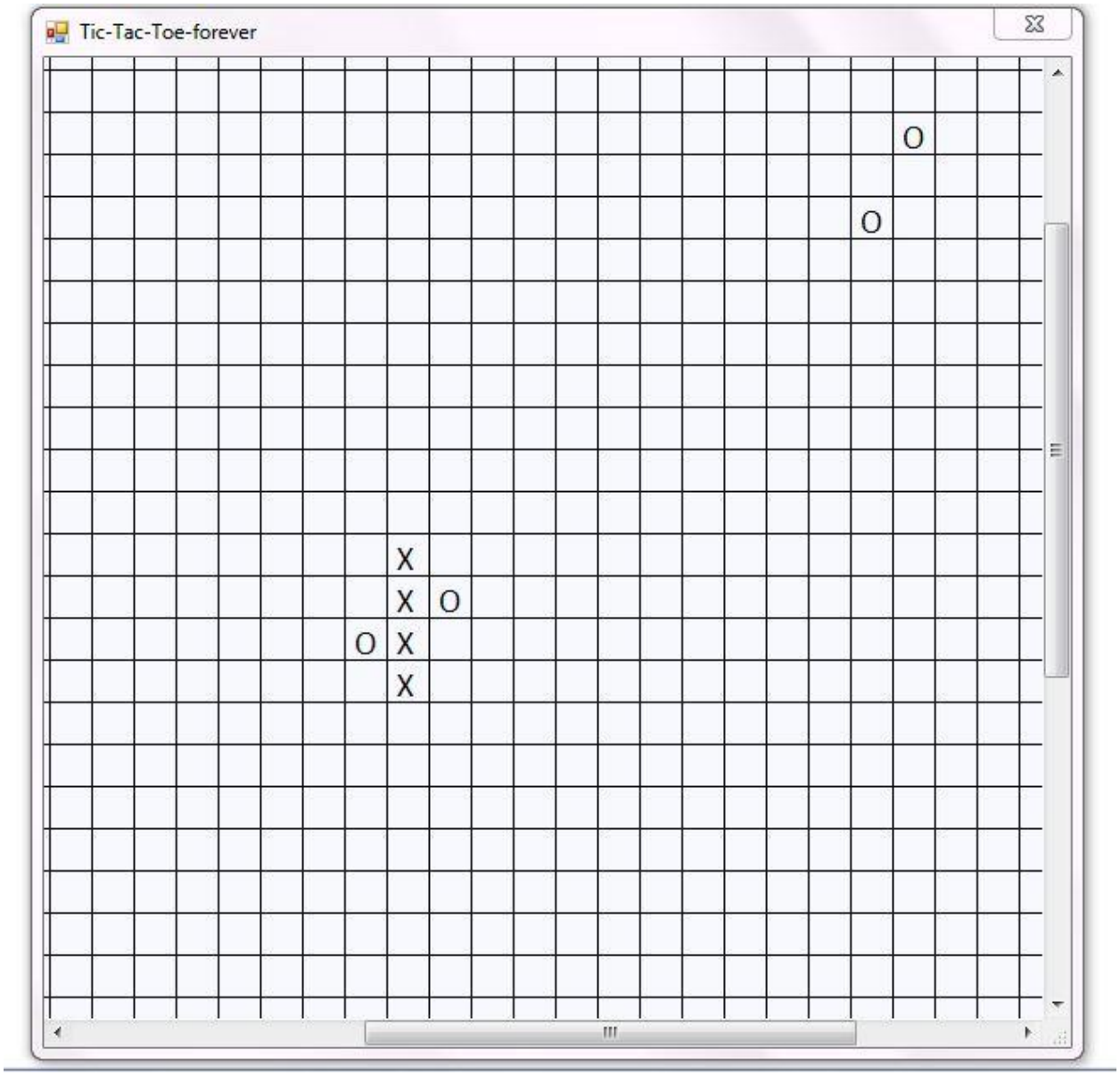
4) The player can start the game by placing coin ‘O’ in the grid at any vacant position. Once the player has placed a coin the system also places its coin ‘X’ by making a move as shown below.



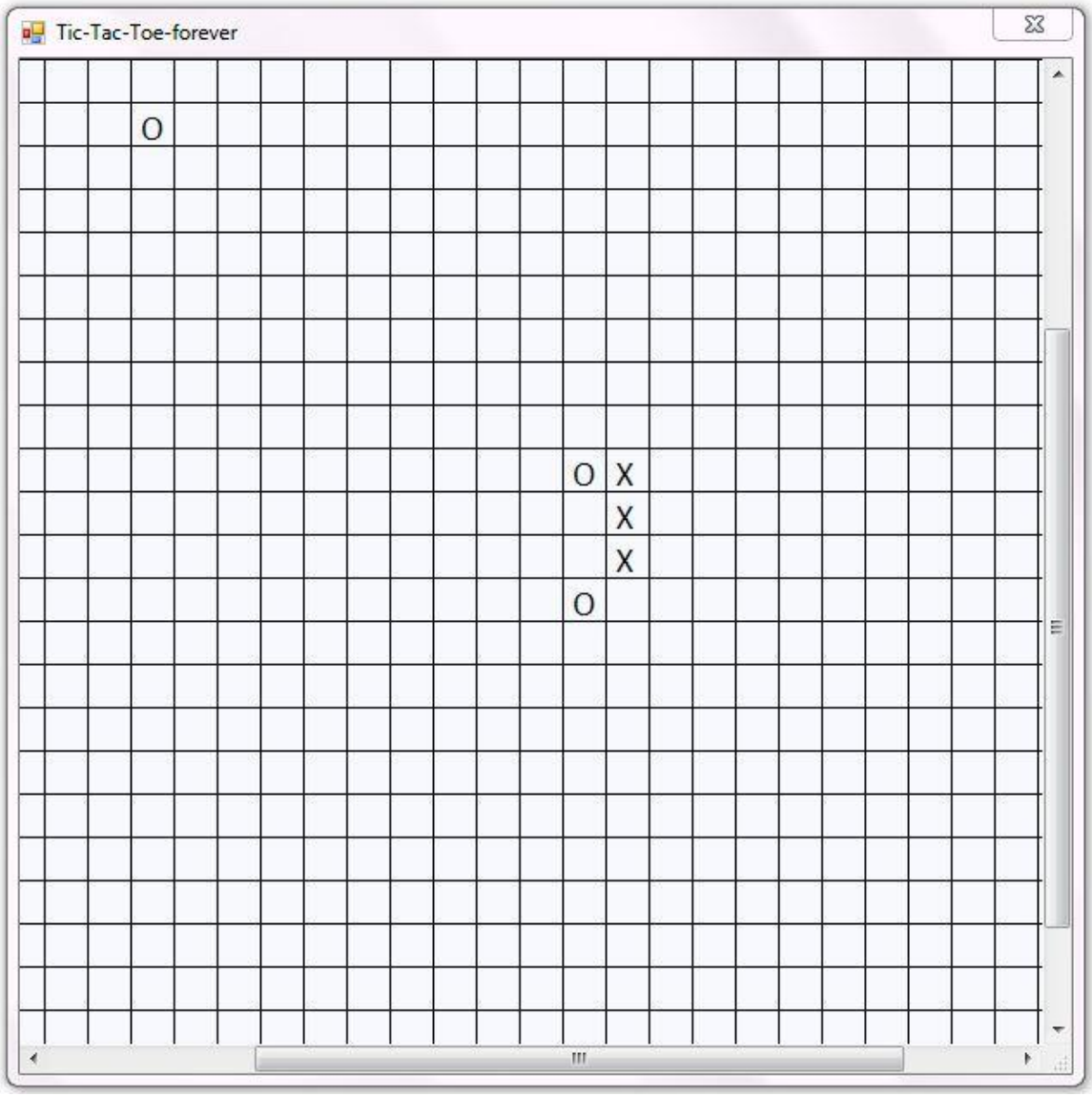
5) The player can make his own moves and can place the coins anywhere in the vacant positions of the grid. In response to the player moves the systems makes it own moves as shown below.



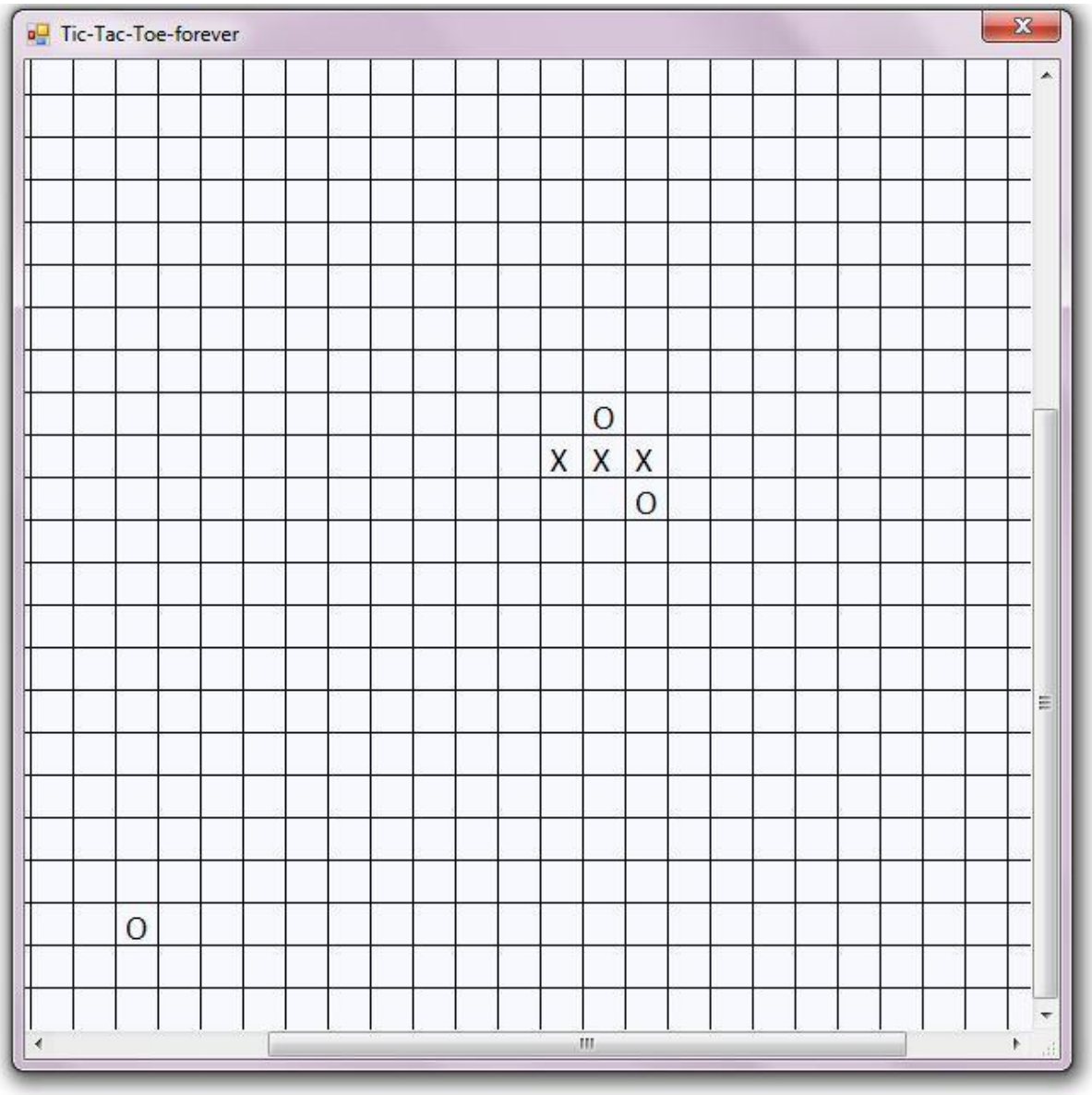
6) When the User makes a move on the top right cell of the grid the grid expands as shown below.



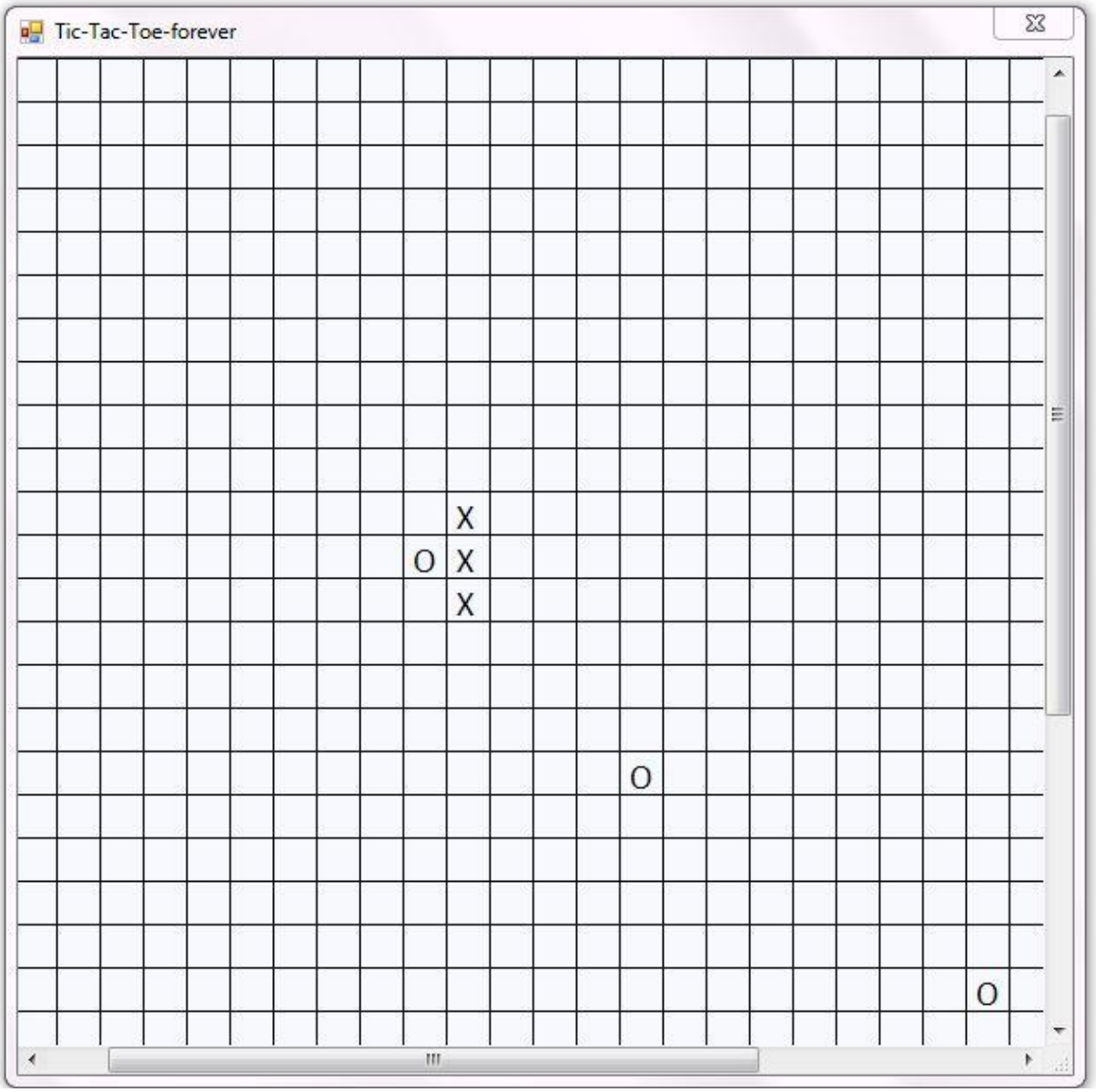
7) When the User makes a move on the top left cell of the grid the grid expands as shown below.



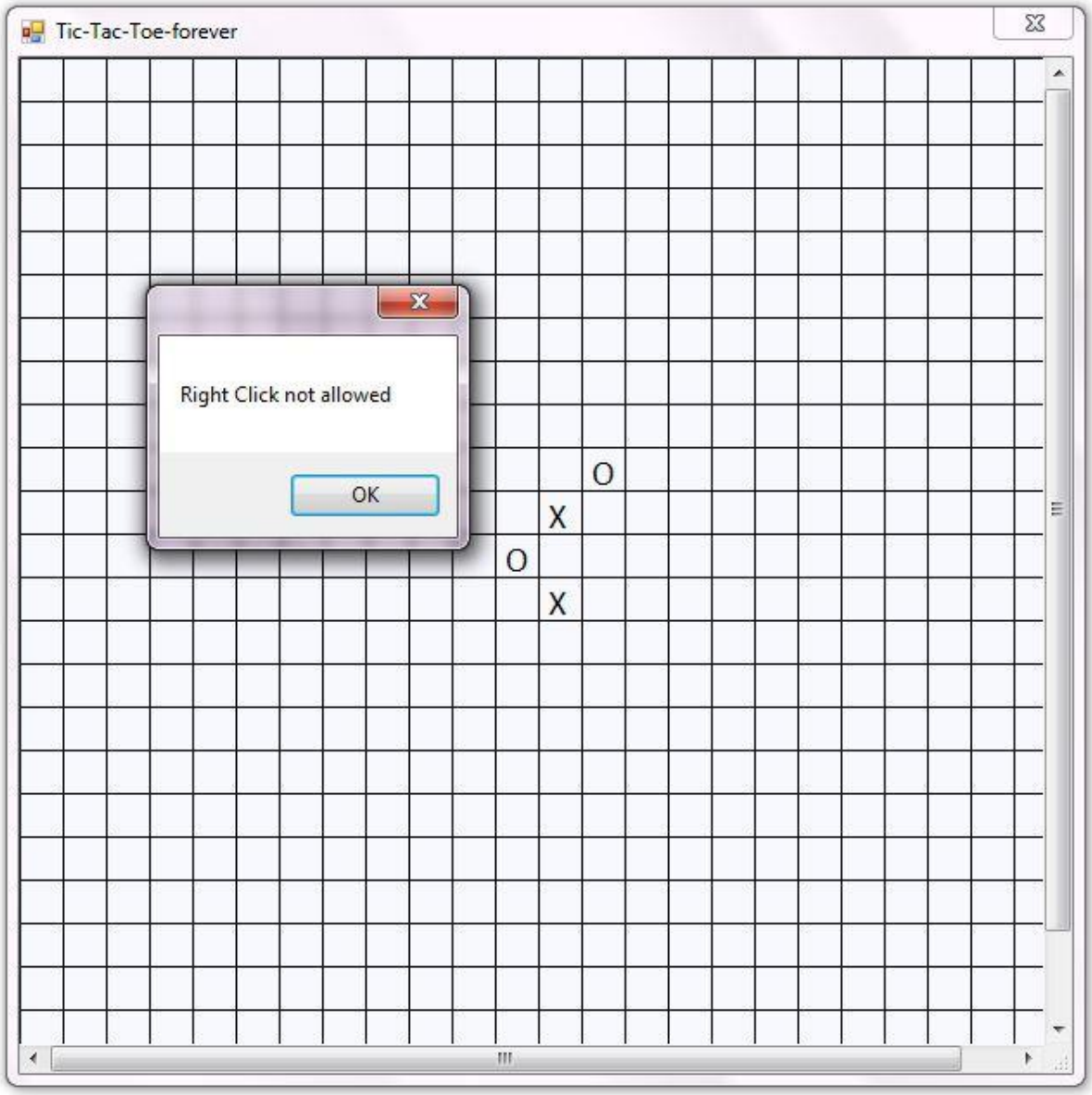
8) When the User makes a move on the bottom left cell of the grid the grid expands as shown below.



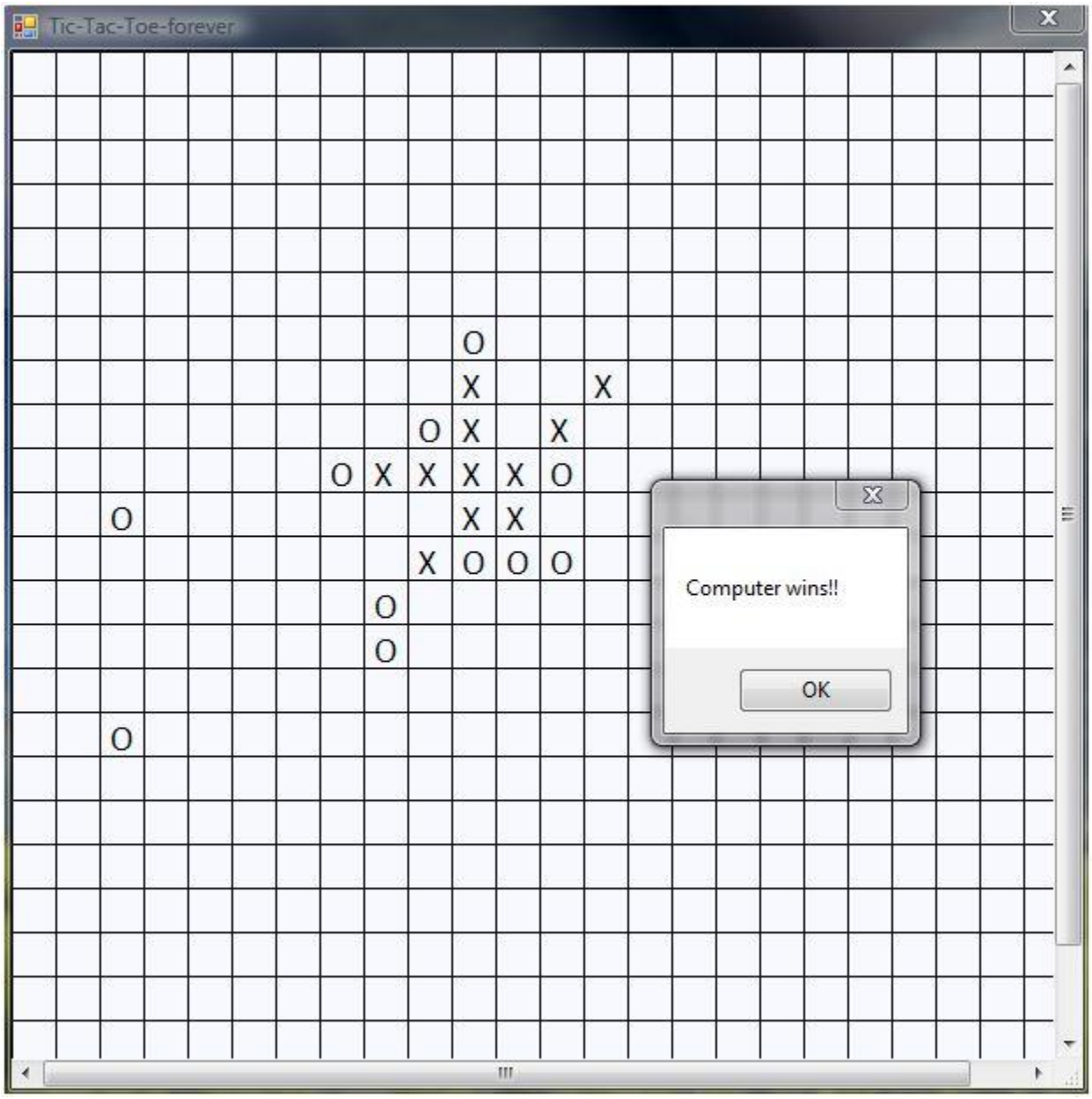
9) When the User makes a move on the bottom right cell of the grid the grid expands as shown below.



10) When you right click on the playing grid a message box appears stating that the action is not allowed.

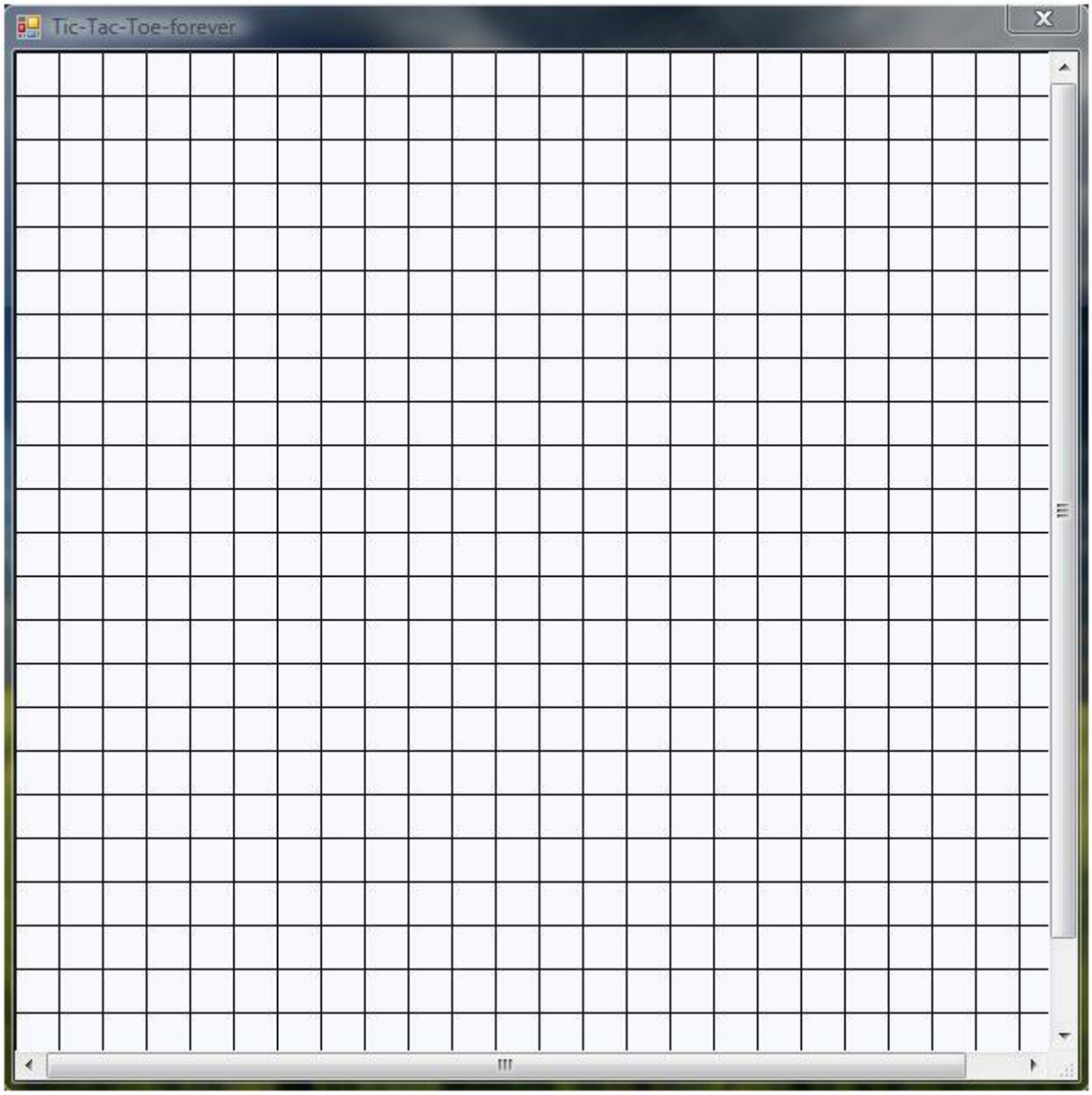


11) If the system places five consecutive coins either horizontally or vertically or diagonally the system wins the game and the message that computer wins will be displayed as shown below.



12) On the click of the button OK the games next screen will be displayed as shown below.

13) On clicking RESTART button the game restarts and displays grid to play again as displayed below.



14) On clicking EXIT the game quits.
15) User making an Invalid move.