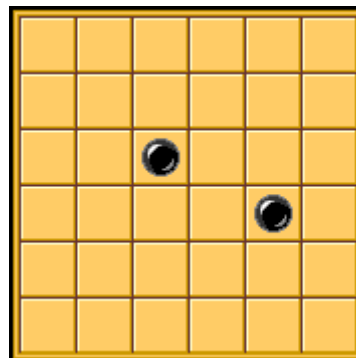
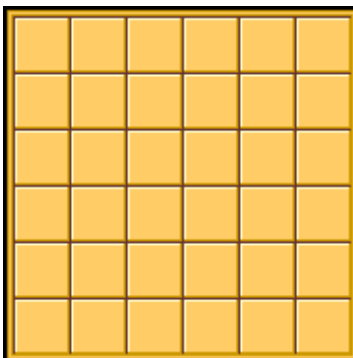


## Stage A – The Triplets

### 1. Defining the Problem

The game, Triplets, is a simple three-in-a-row strategy game originated by Stanislaw Ulam, a Polish-American mathematician. The purpose of the game is to become the first player to place three chips in a row horizontally, vertically or diagonally. The rules of the game are simple but actually, the game itself is quite challenging when played. In addition, while the game sounds similar to Tic-Tac-Toe, it is significantly different. The game of triplets is two people or players playing against placing pieces onto the board one at a time. Until now, it is just like Tic-Tac-Toe but in contrast, players place the identical pieces on the board. The purpose is not only to place three in a row, but also to let opponent to be obliged to make two pieces close so other player can make three in a row right away. The size of the board will be fixed at 6x6 and pieces will be black.



### Rules of the Game

The players start the game by pressing the button start.

The players take turns to place black chip on the board.

Their goal is to not let the opponent make three-in-a-row.

The game ends when three-in-a-row is achieved and the person first to do so is the winner.

After each student was told to think of what he or she would like to create a game or any programs, I chose Triplets which my computer science teacher, XX, offered and he agreed to be the supervisor, (**advisor**). My sister who I persuaded to be the tester and end-user later decided to be my (**client**).

## 2. Rationale for Solution

I decided to computer this game because it is in a way challenging for programmers but when correctly created and oriented, there is no other convenience than using programmed version. When people are simply tired and bored, they can play the game against computers which can give hints to players of winning strategies. Moreover, setting up the board is not so easy and some might even not have the board to play with and thus, have to create it by drawing with their own hands every time which is time consuming. Significantly, people may miss that they have already won. They might perceive differently that they don't realize the game has already finished causing chaos between players. However, with computer there is no misconception and it allows quick evaluation of different tactics of the game.

I decided to use NetBeans for the following reasons:

- It is free and does not require licensing
- The advisor has suggested
- It has JFrame Form which allows us to make designs by simply clicking on buttons and the computer will automatically write programing commands
- The GUI form designer lets me create, move, and adjust GUI controls easily
- There are pop-up code-assistance with hints about why the command does not work
- Immediate error-detection
- Project management

## 3. Criteria for Success

1. An empty board is clearly shown.
2. Player can choose to play with computer or other player
3. When button is clicked, the color becomes black
4. The button can be clicked at any place if it hasn't been clicked yet
5. When playing with computer, the difficulty level is shown and player can reasonably detect the different levels of computer
6. The rules of the game are correctly implemented
7. The game finishes as three-in-a-row is completely created
8. The first player who makes three-in-a-row is announced as the winner

**Words: 395**