### Step 7: Written Report

1. Justification for your refactoring decisions.

The first obvious module to separate is the board. With the clear idea that the board size should be easily changed if needed. It also must have its own set of rules (invalid position / occupied position) and status (full, winner ,…)

The second is the game. It ‘sets up’ the game (with a board and players), keep record for the turn taking, and interact with the user in both ways :

* Inputs : asks for input from users
* Outputs : printing board or other statements

The last one is the player module. Today it is quite ‘light’ but we can easily imagine if the game is online the gamers could have accounts, personalised symbols, record of past games, rewards… Managing this would be much easier if it is a separate module.

1. The challenges you would have faced maintaining and testing the original monolithic code.

Any ‘simple’ modifications would require going through the full code to adapt. More prone to errors as with all the dependencies it if easy to forget something when adapting the code.

Less ‘collaborative: the writer of the code might have a good understanding of his work but anyone else trying to understand / digest it would have headaches !

Less flexibility (e.g. would be really hard to enable multiple board size and the length/complexity of the code would increase enormously)