**Session 2 An Intelligent Piece of Paper Instructions**

You will be using a piece of paper to understand how to not lose at Noughts and Crosses. This makes use of an algorithm that makes decisions based on what is on a noughts and crosses grid.

1. Open the ***Session2\_Paper\_Task*** document and read the introduction carefully to understand what the task is going to be doing. It explains about the “intelligent paper”.
2. Follow the instructions on page 2 to create a noughts and crosses game and the moves that the game uses in this scenario, these are the instructions that the piece of paper is giving. Play to the end of the game. The paper always goes first with X.
3. Try the game again with a different combination of moves, e.g. try a different first space for 0 but always place an X where the paper (instructions) tell you to place them. See if you can beat the paper. Repeat for another start place. Change where you go with you other moves.
4. Read through the background information on the following three pages to understand how computers have been developed to compete against humans and how it follows rules.
5. Finally, try the same instructions when playing against another human. You will go first with X and use the same steps (algorithm) that the paper was using.

**An extension task:**

Can you come up with a similar algorithm to avoid losing at noughts and crosses if you go second?