# Script 11

In this worksheet we have progressively improvements to the strategy for an automated player.

Our front runner is Strategy A as we left it. In the example shown here, over 10,000 rounds, Player A has lost only 75 points – *on average* that’s less than one point lost for every hundred rounds.

But it is important to realise that even following this optimised strategy – you can still *expect* to lose points to the dealer.

Is there scope for further refinement? Yes. Ultimately we would like to determine the optimum draw limit for each possible value of the dealer’s face card, and in each of those cases a separate draw limit for when you are holding a soft ace.

But you will need to learn some techniques to progress this challenge much further – potentially using what’s called a ‘data structure’ - such as an Array – both to better analyse the results of the simulation runs, and, potentially to implement a strategy that covers all the cases I mentioned previously.

It is possible to identify a strategy that reliably loses even fewer points than Player A has done here.

But, be warned, although you might *gain* points over the short run - based on the luck of the draw – there is no legitimate strategy that will completely overcome the dealers advantage in the long run. There’s only one way that’s guaranteed way to make money on Blackjack – and that’s to *be* the Casino.