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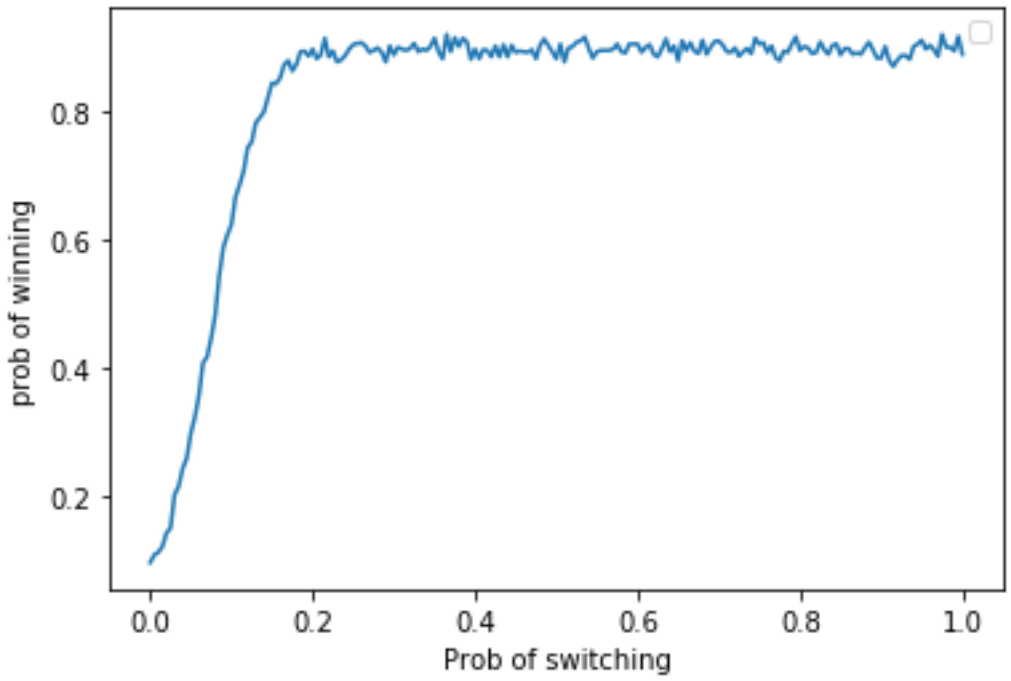
Part 3c



This is the code where I run 1000 simulation, and the number of door in this case is 10,n=10.

So according to theoretical result when Probability of switching is zero, we should get 1/n = 0.1 probability of winning, that's what I am getting from my simulations (Bottom left corner). When Prob of switching is 1, we should get probability of winning n-1/n = 0.9, that's what I observed in my simulation (Top Right Corner).

Part 4:

The contour below shows the probability. As my code is inefficient I can't run my code for a large number of simulations. For this I have chosen N to be In range(3,100) and m in range(1,25). I believe the coding logic that I used is correct but it's getting stuck in some bug which I can't figure out. There seems to be a bug in my problem, I am attaching the result that I obtained.

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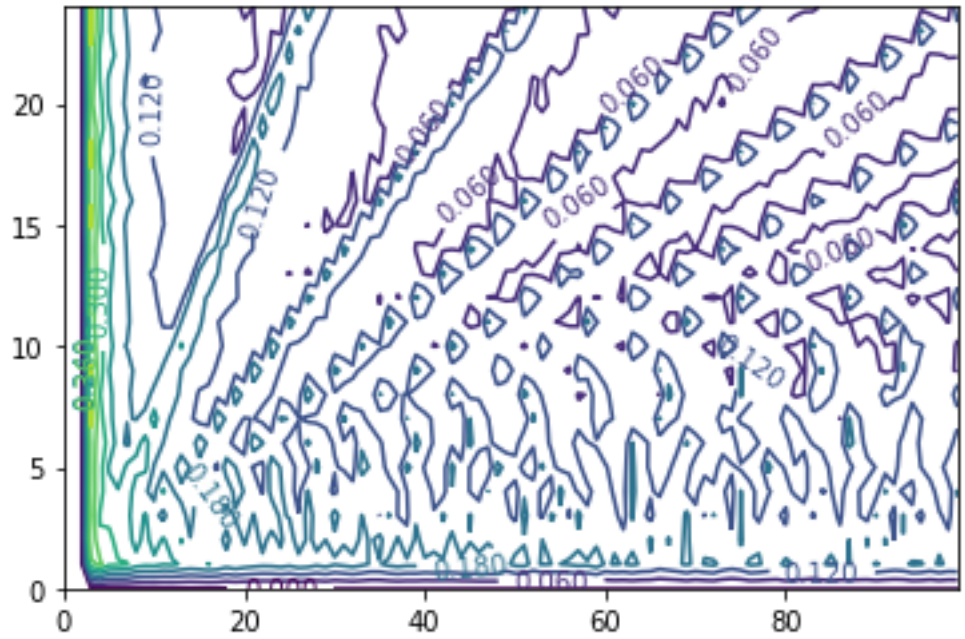
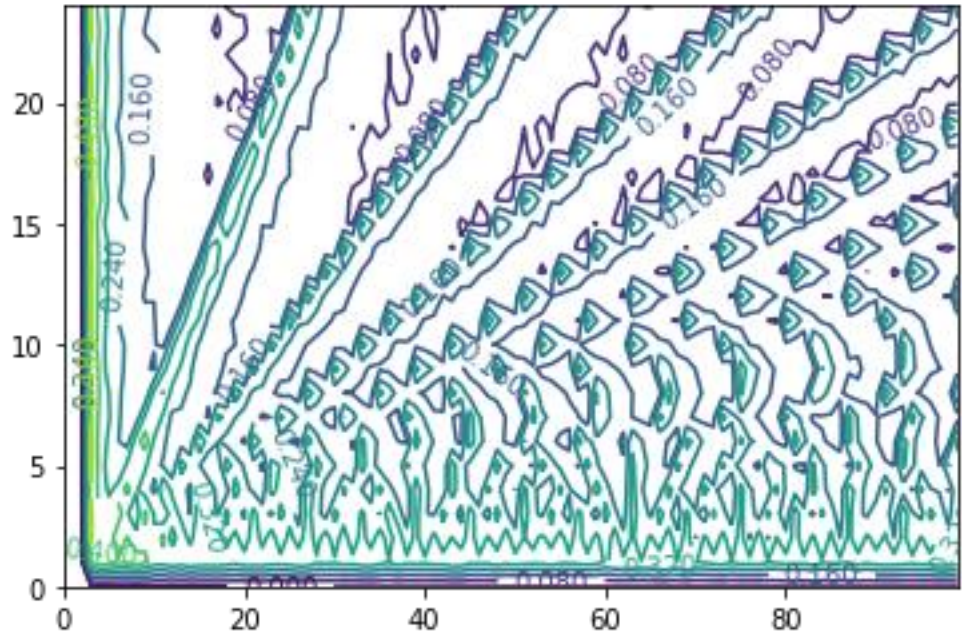


When p = 0.5



When p = 1