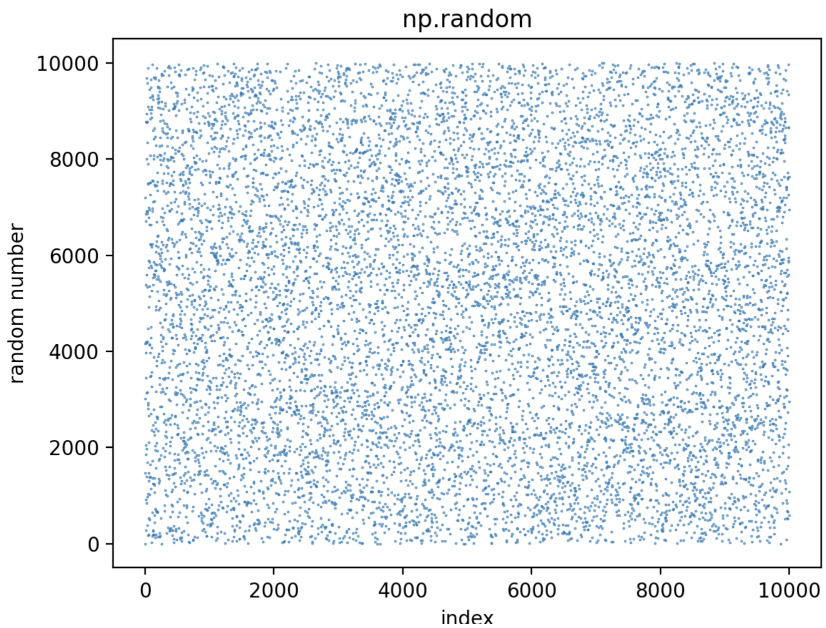
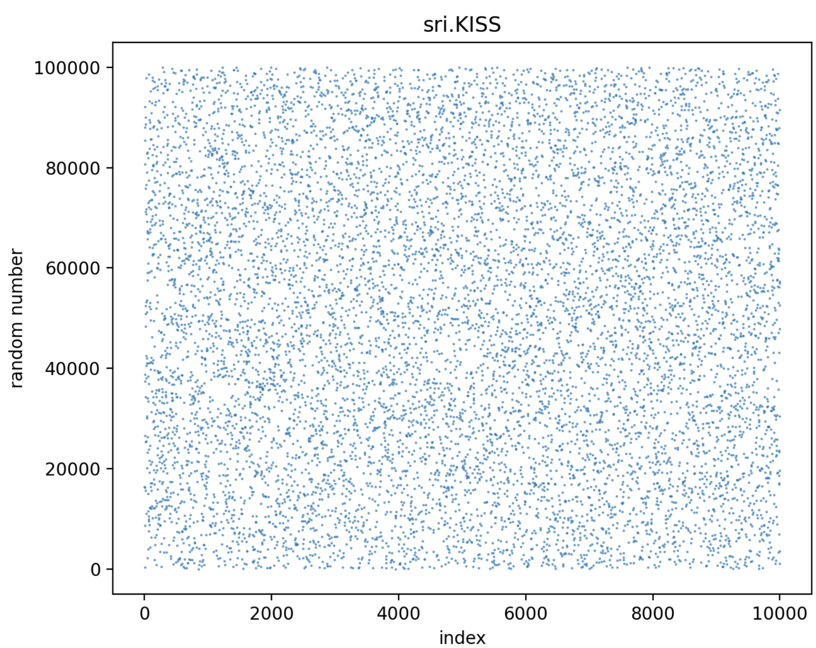
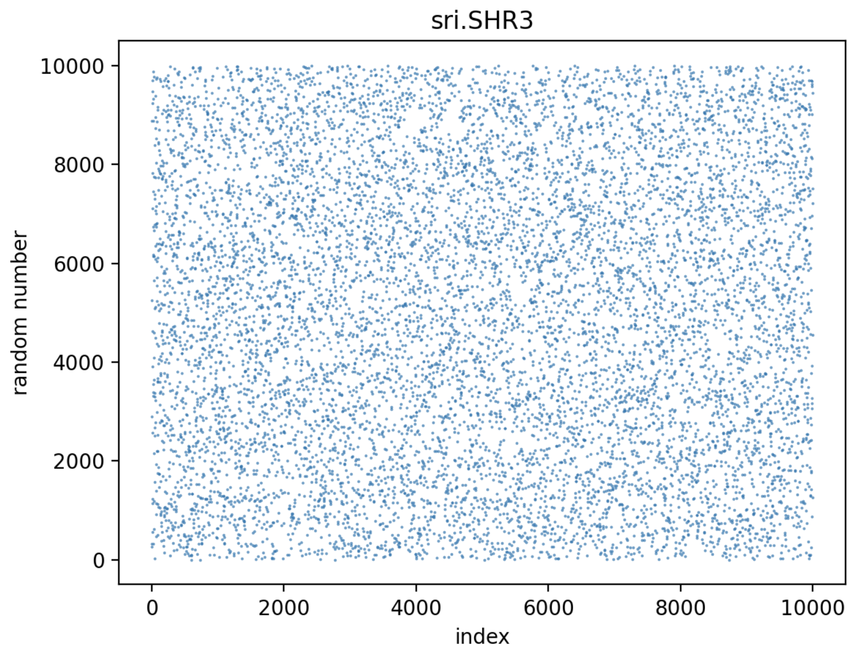
Program1_Report

Due: 2/5/23
CSE107
Gabriel Gorospe
ggorospe@ucsc.edu

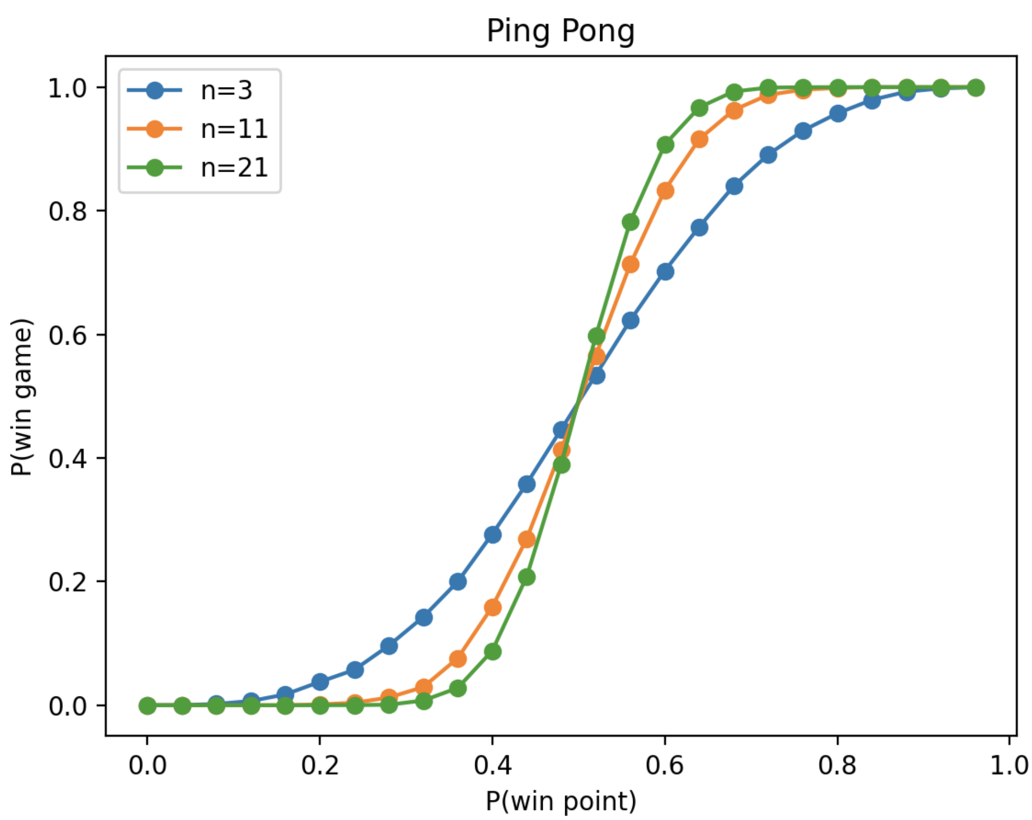
(A)






sri.SHR3
10000
8000
6000
4000
2000
0
random number
0
2000
4000
6000
8000
10000
index

(B)


Ping Pong
n=3
n=11
n=21
1.0
0.8
0.6
0.4
0.2
0.0
P(win game)
0.0
0.2
0.4
0.6
0.8
1.0
P(win point)

Write AT MOST 2-3 sentences identifying the interesting pattern you notice when n gets larger
(regarding the steepness of the curve), and explain why it makes sense.

As the value of n increases, the steepness of the curve near the middle of the x-axis (P(win point) = 0.5) increases. This is because a small difference in probability above or below 0.5 of winning a single point will make a larger difference in probability of winning the game when the score to win is higher, i.e. in a game where n = 21 a player with a P(win point) of 0.6 will have a higher P(win game) than a game where n = 3 and a player with a P(win point) of 0.4 will have a lower P(win game) than a game where n = 3.

Each curve you make for different values of n always (approximately) passes through 3 points. Give the three points (x1, y1), (x2, y2), (x3, y3), and explain why mathematically this happens in AT MOST 2-3 sentences.

Each curve must pass through the 3 points on the P(win game) axis and P(win point) axis; (0,0), (0.5,0.5), and (1,1). This is because a player with a P(win point) of 0 cannot win any points and will certainly lose the game and with a P(win point) of 100 will certainly win the game regardless of the amount of points required to win. A player with a P(win point) of 0.5 is equally matched with the opponent, so P(win game) will be 0.5 regardless of the amount of points required to win.

(C)

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make: *** No targets specified and no makefile found.  Stop.
gabrielgorospe@gabemg525 python % python3 pokemon.py
[0.2, 53.12464, 11.367108, 0.04, 0.678576]
[0.25, 58.874750000000006, 19.6615, 0.041724999999999, 0.6068333333333333]
103.0556
179.9728
```