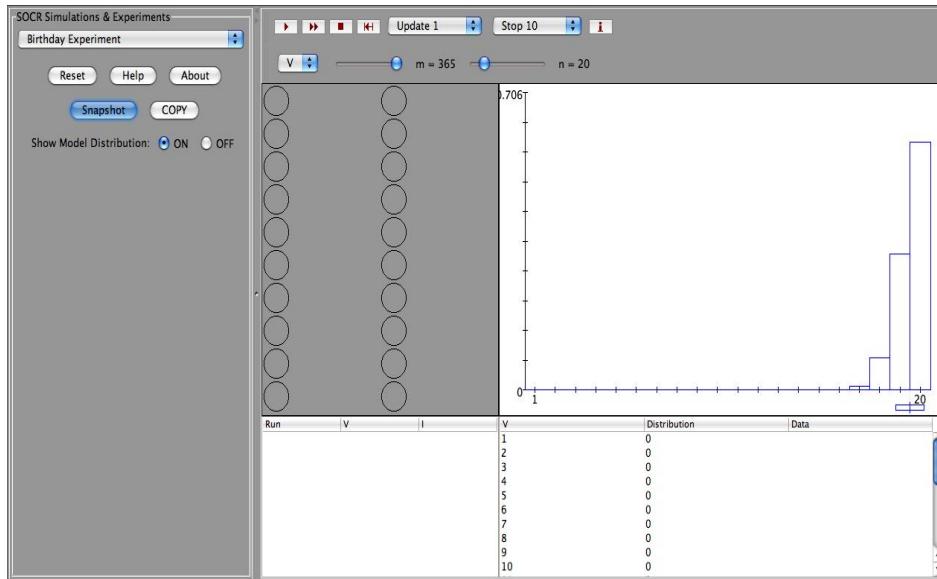


Birthday experiment

- a. Access the Birthday Experiment (see below). Assume 365 days in a year. Suppose there are  $n$  people in a classroom. With the help of the applet, find the minimum value of  $n$  so that the probability that at least two people have the same birthday is more than 50%.



- b. Suppose  $n = 40$ . What is the probability that at least two have the same birthday. You may be surprised to find that this probability is about 90%. Can you give a reason for that? Please show all your work.