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# Project:   Random Walk program
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# SUMMARY
# A person walks a given number of steps along a linear path, starting at the origin (0) and
# randomly choosing to walk left or right at each step.
#   1. How can we determine the end point of this "Random Walk"?
#   2. What would a graph outlining the results of 100 unique " Random Walks" look like?
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# STRATEGY
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# Terms used in explanation below:

# Matrix:    Table-like data structure used in R to store values of the same type
# Histogram: Similar to bar graph, but x axis depicts value range within single data field
# For Loop:  Repetitive call to perform a specific action for a set number of iterations

# Steps taken to solve the Random walk challenge:

# 1. Limit each walk to 100 steps (to keep things simple)
# 2. Generate Matrix (100 rows,1 col) randomly assigning value of "0" or "1" per row
# 3. Via ForLoop, generate 100 unique matrices and bind into single master Matrix (100 x 100)
# 4. Replace each "0" with "-1" within master Matrix
# 5. Determine cumulative sum value per column (unique walk) of master Matrix
# 6. Generate histogram of 100 unique walks, where y = end points and x = step range (-100:100)

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# RESULTING GRAPH
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