
LOTTERY...WINNING?

Learning Objectives

- Work with a simple example of a **simulator**
- Apply the use of **arrays** to a useful situation
- Generate a **random number** in VBA using an Excel workbook function
- Use **loops** to repeat sections of code to perform an operation multiple times
- Use **data validation** functions (if statements, IsNumeric) to ensure a user enters appropriate values

Overview

Consider the following provincial lottery. Five random digits are selected. This is the winning number. You can buy as many lottery cards as you like at \$2.00 per card. Each card contains five random digits. If you get a card that matches the winning number, you win \$10,000. (Assume that order matters. For example, if the winning number is 21345, then 12345 doesn't win.)

Write a sub that does the following: It first generates a random winning number and stores it in a string variable (so that you can use string concatenation), and it asks the user how many cards they want to buy.

It then uses a **For** loop to generate that number of cards and store their numbers in a card array (which should be a String array). Next, it uses a **Do** loop to keep checking cards until a winner has been found or no more cards remain.

Finally, it displays a message stating whether you are a winner and your net gain or loss. Note that you can generate a single random digit from 0 to 9 with Excel's **RANDBETWEEN()** function.

Notes

- For full marks, make sure your code asks for values from the user until a valid one is entered. The **IsNumeric()** function can be used to check to see if a value entered is numeric.
- Use appropriate comments to explain the more complex parts of your code.
- Remember to generate 5 digits from 0 to 9 because it adds 5 "stages" of randomness. Do not generate a number between 0 and 99999 (which actually won't work anyway because the number 0 does not have 5 digits in it).

