Alternate Project 1: Magic Square

Created by Brian Weinfeld

Using Python, you will use variables, input, and casting to create a Magic Square.

Overview

Pick a number from 21-65. **42**, you say? OK! Check this out!

```
22 01 12 07
11 08 21 02
05 10 03 24
04 23 06 09
```

If you add up all the numbers in each row, they total 42. (22 + 1 + 12 + 7 = 11 + 8 + 21 + 2 = 42)

If you add up all the numbers in each column, they total 42. (22 + 11 + 5 + 4 = 1 + 8 + 10 + 23 = 42)

If you add up all the numbers in each diagonal, they total 42. (22 + 8 + 3 + 9 = 7 + 21 + 10 + 4 = 42)

It is the same for each of the four corners, and each 2x2 block as well. (22 + 4 + 9 + 7 = 42)

This is called a **Magic Square** and for this project, you are going to create a program that lets users select a number and create a magic square from that number.

Details

Behavior

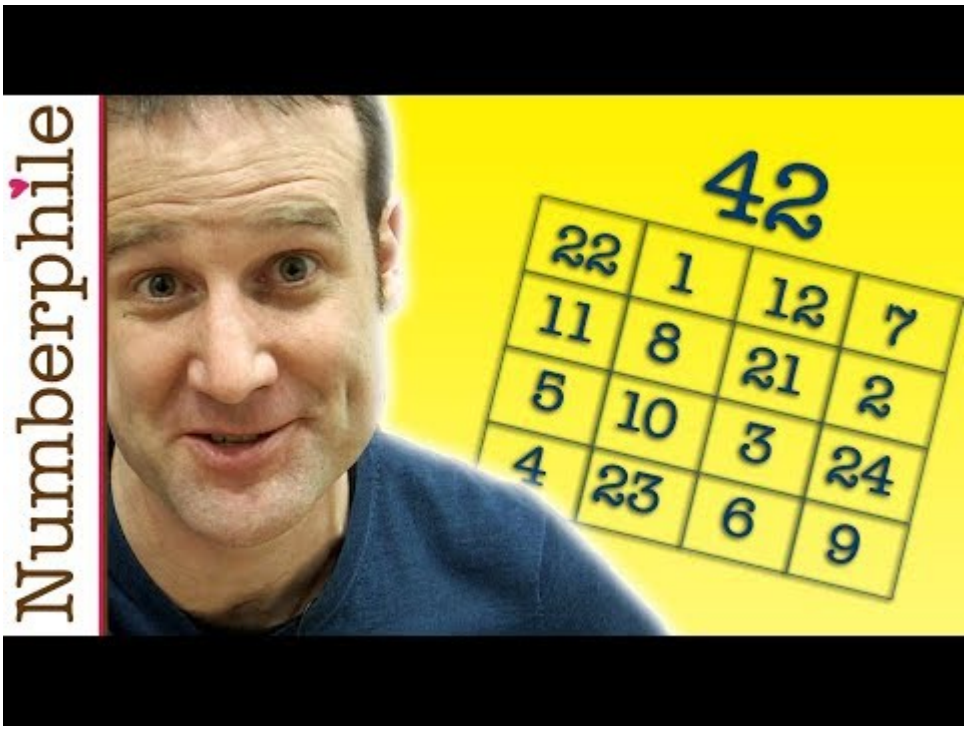
```
Welcome to Magic Square
Enter a number from 21 to 65: 42
You have entered 42

Here is your Magic Square:

22 01 12 07
11 08 21 02
05 10 03 24
04 23 06 09
```

Implementation Details

Believe it or not, Magic Squares are not difficult to make! Watch the following video to see how to make a Magic Square for any given number:



Challenge

This section contains additional components you can add to the project. These should only be attemped **after** the project has been completed.

- What happens if the user enters a number outside the range of 21-65? Try to check for this and print an error message!
- What happens if the user doesn't enter a number at all and enters a word instead? Try to check for this and print an error message!
- Build a Magic Square with a small number like 22. The Magic Square isn't aligned properly and hard to read. Try to fix this!