Third laboratory exercise

1. assignment
   Produce a program that requires the user to input a four digit integer using a user dialogue. If the input value does not satisfy the proposed attributes display an adequate message and request the number to be input again. If the input valueis satisfactory display a message to the user and finish the program.
   Hint: try using the **In Range and Coerce** function from the pallette.

2. assignment
   Generate and display a random ten digit number and then check if it is a prime number (divisible only by itself and 1). The algorithm to check this feature includes dividing the generated number N with all of the integer values between 2 and $\sqrt{N}$ and looking for a 0 remainder. If there is no number that qualifies the number N is a prime number. If there are numbers that you can divide N with and end up with a 0 remainder than count them and display their total count using a thermometer. Measure the time it takes to perform a single run of the calculation and display the value on the Front panel. Advise the user of the result (prime or non prime number) using a dialogue.

3. assignment
   Produce a program which divides the number into thousands, hundreds, tens and ones and than checks if the sum of all the components is a prime number. The front panel should include a LED indicatorwhich lights up every time an integer divider is found. In order for this to be perceptible the loop iteration delay should be around 500 ms. When the program is finished the front panel should display the number of integer divisors and notify the user if the number is a prime or not.
   Hint: the **Quotient and Remainder** function could come in useful.