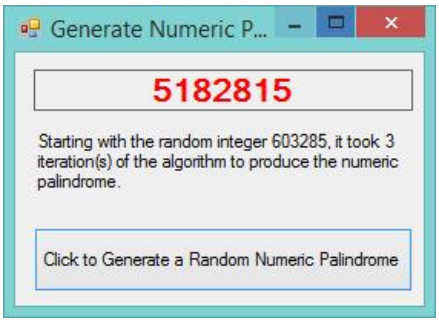
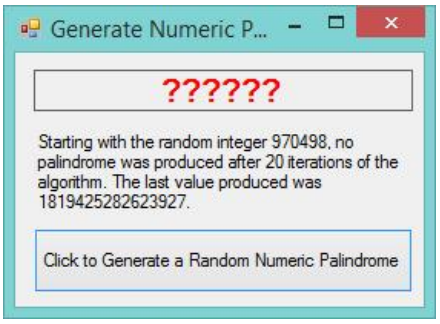
Numeric Palindrome Solution






```
namespace NumericPalindrome
{
    public partial class NumericPalindromeForm : Form
    {
        Random randomNumberGenerator = new Random();

        public NumericPalindromeForm()
        {
            InitializeComponent();
        }

        private string reverseString(string s)
        {
            string reversedS = "";

            for (int i = s.Length - 1; i >= 0; i--)
            {
                reversedS = reversedS + s.Substring(i, 1);
            } //end for

            return reversedS;
        }//end method

        //Event handler for button
        private void generateNumericPalindromeButton_Click(object sender, EventArgs e)
        {
            long initialRandomInt = randomNumberGenerator.Next(10, 999999); //Random integer from 10 to 999999
            long sum, iterations = 0, num = initialRandomInt;

            do
            {

                sum = num + Convert.ToInt64(reverseString(num.ToString()));  //Add "num" to "num" reversed
                num = sum;  //Why is this statement necessary?
                ++iterations;

            } while (iterations <= 20 && sum != Convert.ToInt64(reverseString(sum.ToString())));

            if (sum == Convert.ToInt64(reverseString(sum.ToString())))
            {
                palindromeLabel.Text = sum.ToString();
                messageLabel.Text = "Starting with the random integer " + initialRandomInt + ", it took " +
                            iterations + " iteration(s) of the algorithm to produce the numeric palindrome.";
            }
            else
            {
                palindromeLabel.Text = "??????";
                messageLabel.Text = "Starting with the random integer " + initialRandomInt +
                             ", no palindrome was produced after 20 iterations of the algorithm."
                                                    +"The last value produced was " +sum +".";
            }

        } //end method

    }//end class

}//end namespace
```