Assignment 1

The assignment is due by Friday of Week 1. It is to be submitted in PDF format, and will be graded based on the following criteria:

- **Grading Criteria:**
  - Originality (80%)
  - Clarity (20%)

The assignment is divided into two parts:

**Part 1:**

1. You are given a sequence of numbers. Write a program that generates a table with the following format:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

2. Write a function that calculates the average of the numbers in the table.

3. Write a function that finds the maximum and minimum values in the table.

**Part 2:**

4. You are given a string of characters. Write a program that converts this string into a new string where each character is doubled.

5. Write a function that reverses the order of the characters in the string.

6. Write a function that checks if the string is a palindrome (reads the same backward as forward).

**Submission Instructions:**

- Submit your code and the generated table as a single PDF file.
- The PDF should include the source code and the generated table.
- Submit the PDF to the course's online platform by the due date.

Good luck with your assignment!