### Assignment 0

**Due on:** 08/01/23, 11:59 PM

**Instructions:**

1. Complete the following tasks and submit your work electronically.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>T1</td>
<td>Explain the concept of computational thinking.</td>
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<tr>
<td>T2</td>
<td>Discuss the importance of algorithmic thinking in problem-solving.</td>
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<td>T3</td>
<td>Implement a basic algorithm to solve a real-world problem.</td>
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<tr>
<td>T4</td>
<td>Analyze the efficiency of different algorithms for sorting data.</td>
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<tr>
<td>T5</td>
<td>Design a simulation to model a complex system.</td>
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<tr>
<td>T6</td>
<td>Write a program that uses recursion to solve a puzzle.</td>
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</tbody>
</table>

**Hints:**

- T1: Remember that computational thinking involves breaking down problems into smaller, manageable parts.
- T2: Think about how algorithms can help in automating tasks.
- T3: Consider using a programming language of your choice.
- T4: Compare and contrast different sorting algorithms.
- T5: Use a software simulation package or create your own.
- T6: Explore different base cases for your recursive function.

**Resources:**

- [Introduction to Computational Thinking](https://example.com/computational-thinking)
- [Algorithms and Data Structures](https://example.com/algorithms)
- [Programming Tutorials](https://example.com/programming)
- [Simulation Software](https://example.com/simulation)
- [Recursion Primer](https://example.com/recursion)

**Submission Guidelines:**

- Submit your work as a single PDF or Word document.
- Include a brief explanation of each task and your solutions.
- Code should be well-documented and adhere to basic coding standards.

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**Late Submission Policy:** Late assignments will receive a 5% penalty per day.

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**Technical Support:** If you encounter any technical issues, please contact support@example.com.