Architecture of Parallel Computers

Program 1: GPU Programming

**Plot 1:**

| **Plot 1** | **Base Code** | **Energy Optimized Code** | **% Improvement** |
| --- | --- | --- | --- |
| Total instructions processed |  |  |  |
| Total number of cache accesses |  |  |  |
| Average Energy usage |  |  |  |

**Analysis:**

1. Why is the total number of instructions less than in the base code?

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1. Why are there fewer cache accesses?

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1. What is the parameter that is compromised for saving energy? Why?

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1. Which code would you prefer to use, and under which circumstances?

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1. How did you find your first experience with a simulator?

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1. Where do you think simulators will be helpful?

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**Plot 2:**

| **Plot 2** | **Base Code** | **Energy Optimized Code** | **% Improvement** |
| --- | --- | --- | --- |
| Total instructions processed |  |  |  |
| Total number of cache accesses |  |  |  |
| Average Energy usage |  |  |  |

**Analysis:**

1. Why is the total number of instructions less than in the base code?

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1. Why are there fewer cache accesses?

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1. What is the parameter that is compromised for saving energy? Why?

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1. Which code would you prefer to use, and under which circumstances?

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1. How did you find your first experience with a simulator?

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1. Where do you think simulators will be helpful?

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