

Debugging Rubric

Problem Identification

Criteria	Low Proficiency	Average Proficiency	High Proficiency
Problem Identification	<ul style="list-style-type: none"> <input type="checkbox"/> Struggles to identify the actual problem. <input type="checkbox"/> Cannot differentiate between symptoms of the issue and the issue itself. <input type="checkbox"/> Requires significant guidance to pinpoint where the problem might be. 	<ul style="list-style-type: none"> <input type="checkbox"/> Identifies the general area or aspect of the code where the problem occurs. <input type="checkbox"/> Recognizes symptoms but may occasionally confuse them with the core problem. <input type="checkbox"/> Requires some guidance to pinpoint specific issues. 	<ul style="list-style-type: none"> <input type="checkbox"/> Precisely identifies the root cause of the problem without confusing it with its symptoms. <input type="checkbox"/> Can independently locate the exact part of the code causing the issue. <input type="checkbox"/>
Hypothesis Formulation	<ul style="list-style-type: none"> <input type="checkbox"/> Struggles to form plausible hypotheses related to the identified problem. <input type="checkbox"/> Often jumps to conclusions without a clear basis. <input type="checkbox"/> Lacks a structured approach to forming hypotheses. 	<ul style="list-style-type: none"> <input type="checkbox"/> Forms reasonable hypotheses based on observed symptoms. <input type="checkbox"/> Sometimes requires a few attempts to narrow down to the most likely cause. <input type="checkbox"/> Begins to demonstrate a structured thought process. 	<ul style="list-style-type: none"> <input type="checkbox"/> Consistently forms well-reasoned and logical hypotheses. <input type="checkbox"/> Takes into account multiple potential causes and ranks them based on likelihood. <input type="checkbox"/> Demonstrates a clear, systematic approach to forming hypotheses.
Testing Methods	<ul style="list-style-type: none"> <input type="checkbox"/> Struggles to develop a plan to test hypotheses. <input type="checkbox"/> Often modifies code haphazardly without a clear testing strategy. <input type="checkbox"/> Requires guidance to establish a testing process. 	<ul style="list-style-type: none"> <input type="checkbox"/> Develops basic tests to verify or refute hypotheses. <input type="checkbox"/> Occasionally struggles with isolating specific issues or verifying fixes. <input type="checkbox"/> Begins to show a structured approach to testing, though may miss some nuances. 	<ul style="list-style-type: none"> <input type="checkbox"/> Consistently develops comprehensive tests tailored to the hypotheses. <input type="checkbox"/> Uses tools and debugging features effectively to isolate and verify issues. <input type="checkbox"/> Demonstrates a clear, systematic, and repeatable approach to testing.
Solving the	<ul style="list-style-type: none"> <input type="checkbox"/> Struggles to develop 	<ul style="list-style-type: none"> <input type="checkbox"/> Often develops 	<ul style="list-style-type: none"> <input type="checkbox"/> Consistently develops

Problem

effective solutions, even when the problem is identified.

- Solutions may introduce new problems or fail to address the original issue.
- Requires significant guidance to apply fixes.
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solutions that address the identified problem but might not consider broader implications.

- Sometimes requires a few attempts to find an optimal solution.
- Shows growth in independent problem-solving ability

effective and efficient solutions.

- Considers broader implications and ensures fixes don't introduce new issues.
- Demonstrates a clear understanding of the code's logic and applies solutions seamlessly.
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