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What is Debugging Basics

Debugging: The Key to Fixing Code Errors!

DEFINITION

Debugging is the process of finding and fixing mistakes in computer code. It helps make programs run correctly.

KEY CONCEPTS

Syntax Errors

These are mistakes in the code's structure, like missing punctuation or incorrect commands.

Logic Errors

These occur when the code runs without crashing but produces the wrong output.

Debugging Tools

Software tools that help identify and fix errors in code, like debuggers and linters.

Testing

Running the code with different inputs to see if it behaves as expected.

Step-by-Step Approach

Analyzing the code line by line to locate where things go wrong.

EXAMPLES

- Fixing a missing semicolon in a line of code.
- Changing a variable name to match its usage in the program.
- Using print statements to check variable values during execution.

MEMORY TIPS

- ★ Remember 'Silly Little Errors' for Syntax Errors.
- ★ Think 'Logic is Key' for Logic Errors.
- ★ Use 'Test, Fix, Repeat' for the debugging process.

COMMON MISTAKES

- ✗ Overlooking simple syntax errors like typos.
- ✗ Not testing code after making changes.
- ✗ Assuming the code is correct without checking outputs.

QUICK RECAP

Debugging is essential for fixing errors in code. Focus on syntax and logic errors, use debugging tools, and always test your code after changes.