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COSC-A361-001: Languages & Paradigms

Final Project: "Variable Binding & Scope Analysis"

Scoping Type	Static	Dynamic
Scope Access Vector	Syntax of code	Call order at execution
Variable Binding	During Compilation	During Run-Time
Execution Speed	Faster	Slower
Error Handling	Compilation	Execution
Readability	High to Average	Average to Low
Type Flexibility	Bound to one type unless hybridized variable binding (Python, JavaScript)	Simply redefine the variable and it can change type mid-execution
Predictability	High due to syntax dependence	Lower than static due to call stack dependence
Security	High due to function encapsulation	Low due to intermingling variables & function
Implementation Vectors	Symbol tables/parsers, closures, localized stacks	Singular large call stack, closures impossible