

SE Lab-5 Static Code Analysis Issues

Issues Table

Issue	Type	Line(s)	Description	Fix Approach
Mutable default arg	Bug	8	logs=[] shared across calls in addItem function	Change default to None and initialize in method
Bare except clause	Bug/Security	19	No exception type specified in removeItem function	Replace with specific exception type (e.g., KeyError)
Use of eval	Security	59	eval() function used which can execute arbitrary code	Remove eval() call entirely
Missing encoding	Bug	26, 32	File opened without explicit encoding specification in loadData and saveData	Add encoding='utf-8' parameter to open() calls
No context manager	Code Quality	26, 32	Files opened without 'with' statement - potential resource leak	Use 'with open()' pattern for both file operations
Unused import	Code Quality	2	logging module imported but never used	Remove unused import statement
Global statement	Code Quality	27	Using global statement in loadData function	Consider refactoring to return value instead

Issue	Type	Line(s)	Description	Fix Approach
Function naming	Style	8, 14, 22, 25, 31, 36, 41	Function names don't conform to snake_case naming style	Rename all functions to snake_case (addItem to add_item, removeItem to remove_item, getQty to get_qty, loadData to load_data, saveData to save_data, printData to print_data, checkLowItems to check_low_items)
Missing module docstring	Documentation	1	No docstring at module level	Add module-level docstring explaining purpose
Missing function docstrings	Documentation	8, 14, 22, 25, 31, 36, 41, 48	No docstrings for any functions	Add docstrings to all functions describing parameters, return values, and behavior
String formatting	Style	12	Using % formatting instead of f-string	Replace with f-string: f"Added {item}: {qty}"
Missing 2 blank lines	Style	8, 14, 22, 25, 31, 36, 41, 48, 61	Expected 2 blank lines before/after function definitions per PEP 8	Add proper blank lines between all functions and after final function
Missing final newline	Style	61	File doesn't end with newline character	Add newline at end of file