PES1UG23CS724   Yuv Nahar   SE LAB 5
Static Coding Analysis   5th SEM L section

Known Issue Table:

Issue	Type	Line(s)	Description	Fix Approach
Mutable default arg	Bug	10	logs=[] shared across calls causes state retention	Change default to None and initialize logs=[] inside function body
Bare except	Security/Style	19	No exception type specified; silently catches all errors	Replace bare except with specific exception (KeyError) or check item existence first
eval() usage	Security	59	eval() executes arbitrary code; major security risk (Bandit B307)	Remove eval() line entirely; serves no purpose and is dangerous
Missing final newline	Style	61	File missing newline at end	Add newline at end of file
Missing module docstring	Documentation	1	Module lacks a descriptive docstring	Add module-level docstring at top explaining inventory system purpose
Missing function docstrings	Documentation	8, 14, 22, 25, 31, 36, 41, 48	All functions missing docstrings explaining purpose/parameters	Add docstrings to all functions describing parameters and return values
Function names not snake_case	Style	8, 14, 22, 25, 31, 36	Function names use camelCase instead of snake_case (addItem, removeItem, etc.)	Rename all functions to snake_case: add_item, remove_item, get_qty, load_data, save_data, print_data, check_low_items

Issue	Type	Line(s)	Description	Fix Approach
Old-style string formatting	Style	12	Using % formatting instead of f-strings	Convert to f-strings: f"{datetime.now()}: Added {qty} of {item}"
File not closed properly	Bug/Resource leak	28, 33, 37, 42	Files opened without context manager (with statement); not closed on exception	Use with open() context manager for all file operations to ensure proper cleanup
Global variable modification	Code smell	29	Direct global modification without proper encapsulation	Add proper function signature and consider encapsulation or class-based approach
Expected 2 blank lines	Style	8, 14, 22, 25, 31, 36, 41, 48, 61	PEP 8 requires 2 blank lines between top-level functions	Add 2 blank lines between all function definitions
Invalid type handling	Bug	53, 54	main() passes invalid types (int as item, str as qty) without validation	Add type checking and validation in functions; raise ValueError for invalid types
No input validation	Bug	10, 15	Functions accept any type without validation; leads to runtime errors	Add isinstance() checks for item and qty parameters; raise descriptive errors
Unused import (logging)	Style	2	logging imported but never used in the code	Remove unused import statement for logging module