`print_error.py` – Statement Coverage

Test Case ID	Scenario	Inputs	Expected Output	Covered Statement	Pass / Fail
PE-01	Non-fatal error	description="Error A", context="Context A", fatal=False	ERROR: Context A: Error A	else print statement	Pass
PE-02	Fatal error	description="Fatal B", context="File B", fatal=True	ERROR: Fatal error - File File B - Fatal B	if print statement	Pass

`read.py` – Statement Coverage

Test Case ID	Scenario	Input Line	Expected Output	Statement Covered	Pass / Fail
RD-01	Invalid line length	"short\n"	Invalid length error	Line length check	Pass
RD-02	Invalid account number	Line with non-digit account number	Account number error	Account number check	Pass
RD-03	Invalid status	Line with status 'Z'	Status error	Status check	Pass
RD-04	Invalid balance format	Line with malformed balance (e.g., 0000x.00)	Balance format error	Balance format check	Pass
RD-05	Negative balance	Line with balance "-0100.00"	Negative balance error	Balance negativity check	Pass
RD-06	Invalid transaction count	Non-digit transaction count	Transaction count error	Transaction field check	Pass
RD-07	Invalid plan type	Line with invalid plan type (e.g., ZZ)	Plan type error	Plan type check	Pass
RD-08	Valid line	Properly formatted valid account line	Parsed and added to account list	Successful account append	Pass

`write.py` – Branch Coverage

Test Case ID	Scenario	Account Dict Fields	Expected Result	Branch/Decision Tested	Pass / Fail
WR-01	Invalid account number	account_number ='abcde'	Raise ValueError	isdigit() False	Pass
WR-02	Account number > 5 digits	account_number ='123456'	Raise ValueError	Length check False	Pass
WR-03	Name too long	name='A'*25	Raise ValueError	Name length check False	Pass
WR-04	Invalid status	status='Z'	Raise ValueError	Status check False	Pass
WR-05	Invalid balance type	balance='invalid'	Raise ValueError	Instance check False	Pass
WR-06	Negative balance	balance=-100.0	Raise ValueError	Balance < 0	Pass
WR-07	Balance exceeds max	balance=100000 .0	Raise ValueError	Balance > 99999.99	Pass
WR-08	Invalid plan type	plan='ZZ'	Raise ValueError	Plan check False	Pass
WR-09	Valid account entry	Valid dict with all proper fields	Line written to file	All validations passed	Pass

`read.py` – Path Coverage

Test Case ID	Path Description	Input Line	Expected Output	Distinct Path Covered	Pass / Fail
RP-01	Path: line too short	"short\n"	Length error printed	Early exit due to line length	Pass
RP-02	Path: Invalid status	Line with status='Z'	Status error printed	Skips remaining validations	Pass
RP-03	Path: Valid account parsed	Fully correct line	Appended to accounts	All validations succeed	Pass
RP-04	Path: Invalid plan after valid	Valid account + ZZ plan	Plan type error	Last field failure	Pass

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RP-05	Path: Negative balance after valid status	Status OK, balance "-100.00"	Negative balance error	Middle field failure	Pass