**ERROR CONDITIONS TESTING CHECKLIST**

| **#** | **Item** | **Yes** | **No** | **N/A** | **Comments** |
| --- | --- | --- | --- | --- | --- |
| 1.2. | Functional error conditions* Rejection of invalid data formats
* Rejection of invalid data ranges
* Rejection of invalid data types
	+ Alphabetic data in numeric fields
	+ Blanks in a numeric field
	+ All blank condition in a numeric field
	+ Numeric values in an alphabetic field
	+ Blanks in an alphabetic field
* Rejection of invalid signed data
	+ Negative values in a positive field
	+ Positive values in a negative field
	+ Negative balances in a financial account
* Rejection of invalid data codes
* Rejection of invalid data relationships
* Rejection of invalid dates
* Rejection of invalid sequences
* Rejection of invalid transactions due to:
* Incorrect/Invalid value
* Incorrect/Invalid customer
* Incorrect/Invalid product
* Incorrect/Invalid transaction type
* Incorrect/Invalid price
* Warning/prevention of data truncation
* Data sizes longer than fields will accept
* Totals greater than field size
* Incorrect totals
* Obsolete data
* The ability to handle future data values not currently defined to the system.
* Sorting of data
* Matching and merging of data

Structural error conditions* Internal sorts tested
* Dead code identified
* Endless loops identified
* Branching to invalid memory addressing identified
* Memory buffer overflows identified
* All critical code paths tested
* All critical code instructions tested
* All critical branches tested
* All performed routines tested
* All called routines tested
* Error messages tested
* Compiler messages have been investigated and resolved
* Version correctness of the software verified
 |  |  |  |  |

Unit Test Checklist

Project Name/Version:

Module Name:

File Name(s):

| **Check List** | **Yes** | **No** | **N/A** |
| --- | --- | --- | --- |
|  |  |  |  |
| **SCREEN INTERFACE:** |  |  |  |
| Are all field labels/numbers present and spelled/identified correctly? |  |  |  |
| Do List Boxes/Drop-Down Lists contain all required inputs? |  |  |  |
| Is field long enough to display entire data element? |  |  |  |
| Have all required options been incorporated in the radio buttons? |  |  |  |
| Is cursor navigation between fields correct? |  |  |  |
| Does field prevent entries beyond maximum length? |  |  |  |
| Does field initialize with correct information when entering the screen? |  |  |  |
| Can screen be accessed correctly (by menu, icon, list, button etc.)? |  |  |  |
| Can screen be used in all modes (Add/Delete/Change/Display/View)? |  |  |  |
| Do data filters work correctly? |  |  |  |
| Does cancel/escape take you back to the previous screen or menu? |  |  |  |
| Does each defined function key work as expected? |  |  |  |
| Does the system ignore function keys not defined? |  |  |  |
| Are function keys consistent? |  |  |  |
| Does the window maximize correctly? |  |  |  |
| Does the window minimize correctly? |  |  |  |
| Does the window close/exit correctly? |  |  |  |
| Do all buttons work correctly? |  |  |  |
|  |  |  |  |
| **MENU OPERATIONS** |  |  |  |
| Are all menu labels and descriptions labeled/spelled correctly? |  |  |  |
| Do the shortcut keys work correctly? |  |  |  |
| Does defined letter shortcut work correctly? |  |  |  |
|  |  |  |  |
| **NUMERIC FIELDS:** |  |  |  |
| Do negative numbers process correctly? |  |  |  |
| Are character and symbol entries rejected? |  |  |  |
| Are fields signed correctly? |  |  |  |
| Does number contain correct decimal placement (left and right)? |  |  |  |
| Does the field accept the maximum value correctly? |  |  |  |
| Does the field accept the minimum value correctly? |  |  |  |
|  |  |  |  |
| **RECORD UPDATES:** |  |  |  |
| Does screen save data correctly? |  |  |  |
| Does screen reject data correctly? |  |  |  |
| Does database update with expected data? |  |  |  |
| Does screen protect against adding duplicate records? |  |  |  |
| Does screen save modified data correctly? |  |  |  |
| Does the first record process correctly? |  |  |  |
| Does the last record process correctly? |  |  |  |
|  |  |  |  |
| **COMPUTATIONS:** |  |  |  |
| Do field required calculations generate correct output? |  |  |  |
| Do algorithms reject division by 0? |  |  |  |
| Do averages or percents work with very large numbers? |  |  |  |
| Do averages or percents work with very small numbers? |  |  |  |
| Do fields round/truncate correctly? |  |  |  |
| Are non-integer inputs processed correctly? |  |  |  |

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| --- | --- | --- | --- |
| **Check List** | **Yes** | **No** | **N/A** |
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| **FILES AND ARRAYS:** |  |  |  |
| Does system handle empty files correctly? |  |  |  |
| Does system handle files with corrupt data? |  |  |  |
| Does system handle files with incomplete data? |  |  |  |
| Does system process input data correctly? |  |  |  |
| Does system handle two input files for same day correctly? |  |  |  |
| Does DCL work correctly? |  |  |  |
| Is EOF indicator correctly located? |  |  |  |
| Is data written to correct file? |  |  |  |
| Is data written in correct format? |  |  |  |
| Is output file size correct? |  |  |  |
| Is output complete? |  |  |  |
| Is file integrity maintained when program aborts? |  |  |  |
| Does file open correctly? |  |  |  |
| Does the correct file version/generation open? |  |  |  |
| Does the file close? |  |  |  |
| Does file create correctly? |  |  |  |
| Does the array fill correctly? |  |  |  |
| Is there protection against subscripts which are too large? |  |  |  |
| Do wildcard searches yield expected results? |  |  |  |
| Do exact searches yield expected results? |  |  |  |
|  |  |  |  |
| **DATES:** |  |  |  |
| Do date inputs convert to correct application date format? |  |  |  |
| Do dates comparisons work correctly? |  |  |  |
| Does leap year work correctly? |  |  |  |
| Does holiday date-sensitive logic work correctly? |  |  |  |
| Does year 2000 work correctly? |  |  |  |
| If current date is required, does it error if other dates are input? |  |  |  |
|  |  |  |  |
| **ERROR CONDITIONS:** |  |  |  |
| Are error messages correct? |  |  |  |
| Does each error condition display individually? |  |  |  |
| Does the cursor move to the field in error? |  |  |  |
| Can multiple error conditions be created? |  |  |  |
| Does the cursor move to the first field in error? |  |  |  |
| Does the first error message match the first field in error? |  |  |  |
|  |  |  |  |
| **REPORTS:** |  |  |  |
| Does report totals match screen totals? |  |  |  |
| Does report generate? |  |  |  |
| Does report sort correctly? |  |  |  |
| Does report foot correctly? |  |  |  |
| Are headers spelled correctly? |  |  |  |
| Do headers line up correctly? |  |  |  |
| Does report break correctly? |  |  |  |