# TEST 1 – not yet implemented

## Error conditions handled smoothly

In most cases tests should include confirmation that the macro handle invalid or error conditions smoothly, with a clear message to the user, and an appropriate return value to the calling program.

For example, given an invalid data set name, a macro should set the global macro variable CONTINUE to 0 (See [Project Programming Guidelines](http://www.phusewiki.org/wiki/index.php?title=WG5_P02_Programming_Guidelines) for further discussion).

## Checks

1. Invalid parameter produces clear message
   1. Missing/Invalid data set
   2. Missing/Invalid visit variable
   3. Missing/Invalid treatment variable

# TEST 2

## Title of this macro-specific test

Brief description and justification of this test.

For example, illustrate the need for this test using an example from clinical trials analysis.

## Checks

1. MAX 10 boxes per page for rectangular data set (consistent number of TREATMENTs for every VISIT)
   1. Numeric VISIT and TREATMENT variables
   2. Character VISIT and TREATMENT variables
2. MAX 10 boxes per page for data set with gaps (some TREATMENTs missing from some VISITs)
   1. Numeric VISIT and TREATMENT variables
   2. Character VISIT and TREATMENT variables
3. not yet implemented – REPEAT a & b for 5 and 20 boxes per page

# TEST 3

## Confirm expected log messages

In most cases tests will include failure scenarios, which should produce log messages. The following log messages are EXPECTED due to test design (testing failure conditions):

WARNING: (UTIL\_BOXPLOT\_VISIT\_RANGES) User must ensure PhUSE/CSS utilities are in the AUTOCALL path.

WARNING: (UTIL\_BOXPLOT\_VISIT\_RANGES) Expecting NUMERIC visit numbers. Results may be unexpected.

WARNING: (UTIL\_BOXPLOT\_VISIT\_RANGES) Expecting NUMERIC visit numbers. Results may be unexpected.