



PROJECT **PERFECT**  
Pty Ltd

# Testing Checklist

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## Document History

Version	Author	Date	Changes
0.1	Neville Turbit	1 Feb 09	First draft

# Testing Scenario Checklist

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## Contents

Whilst not a complete lists, the following are areas that should be considered for testing. The list has been broken down into the following areas:

- Unit Testing
  - System Testing
  - User Acceptance Testing
  - Integration
  - Performance or Stress Testing
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# Unit Testing

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**Overview** The following items are normally tested at this time and can be included as general features to test:

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**Report and Enquiry Function Tests**

- Field names on reports and enquiry screens are correct.
  - The report layout matches the users' requirements.
  - Meets report coding and layout standards
  - Page breaks occur where they should.
  - Blank lines occur where they should.
  - Totals add up correctly.
  - Totals are reset when they should.
  - Totals do not get truncated.
  - Fields print their full name.
  - Rounding errors do not occur.
  - Page numbers change on each page,
  - Date and time are printed where they should be.
  - Program name and number are printed correctly.
  - Fields are edited correctly:
  - Zero values print as required (blank, 0.00, 00.00 etc)
  - Negative values appear as .... e.g. CR, -,
  - Report is printed in the correct sort sequence.
  - Only records selected appear.
  - Only fields requested appear.
  - Detail lines, which contain only zero values, do not print.
  - Number of records in the report is print at the end.
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**Input Screen Tests**

- Character Tests. E.g. - \_ “ , . :
  - Cannot skip mandatory fields
  - Skipping optional fields
  - Numerics only in numeric fields (no alphabetic or characters)
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**Field Value Tests**

- Zeros where appropriate and printed in correct format
  - Minimum positive and negative values
  - Maximum field sizes
  - Pick lists available and display description
  - Field level help
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## Unit Testing, Continued

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### Date and Time Value Tests

- Includes start and end of month and years
  - Correct format of date and time
  - Month is in the range '01' - '12'. Cannot enter 13<sup>th</sup> month.
  - Date is greater than or equal to today's date (if appropriate e.g. date of birth cannot be greater than today)
  - 'Date to' field greater than or equal to 'date from' field
- 

### Range Tests

- One less than lower/upper limit
  - Middle of range
  - Equal to lower/upper limit
  - One higher than lower/upper limit
  - Maximum field's value equal or greater than minimum field's value
  - Maximum field's value not less than minimum field's value
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### Table Validation Tests

- Equal to first value in table
  - Equal to middle value in test
  - Equal to last value in table
  - Not in table
- 

### Terminal Screen Specific Tests

- All field names are correct
  - Operates correctly on all terminals it is supposed to i.e. dumb terminals, PC, Windows 2000, XP, Windows NT, etc
  - Totals add up correctly
  - Full screen level help
  - Shortcut keys work as expected
- 

### Update Function Tests

- Add a record not on file
  - Add a record already on file.
  - Enquire on a record not on file.
  - Enquire on a record on file.
  - Change a record on file.
  - Delete a record.
  - System generated primary key is correct.
  - On delete, checks for foreign keys and correctly follows referential integrity rules.
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## Unit Testing, Continued

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### Security

- Unauthorised users do not have access to the system.
  - User has access to authorised menu options/functions
  - User has access to authorised data.
  - User is only able to do authorised functions i.e. insert, update, delete, enquire.
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# System Testing

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**Overview** System testing involves testing that a system or module (for larger applications) built as a single development effort, works as required. System testing is usually done against the developer's view of expected functionality. Each component works with other functions and programs.

- Conformance to programming standards.
- Consistent look and feel with other parts of the system
- Performance characteristics e.g. Elapsed times of queries, movement of cursor etc.
- System documentation in place

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**Report and Enquiry Function Tests**

- All field names on the report are correct and consistent between reports.
- All screen and report layouts are the same.
- Totals add up correctly across reports and screens.

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**Input Screen Tests**

- All field names across the screens are consistent and correct.
- The correct records appear on the screen.
- Insert, update and delete operations function correctly across screens.
- Totals add up correctly and consistently across screens.
- The system behaves consistently always giving uniform results.
- Automatic duplication of data from one record to another where appropriate.

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**System Testing**

- All screen layouts are the same.
- Keyboard usage the same

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**Security**

- Unauthorised users do not have access to the system.
- User has access to authorised menu options/functions across the system.
- User has access to authorised data.
- User is only able to do authorised functions i.e. insert, update, delete, enquire.
- Drop down lists do not display restricted data. For example if user can only see State data, do drop down lists show national data.

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**Hardware, Network, Printers**

- Test that all appropriate hardware, network and printers are available and function correctly.

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# Prototype Testing

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**Overview** The focus of prototype testing is to refine the requirements during the development. As such, the focus is more on “does it operate in a manner that we can use” as opposed to “does it operate accurately”

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- Report and Enquiry Function Tests**
- Reports provide all necessary information
  - There are no superfluous fields on reports
  - Layout is clear
  - Sub-totals provide required information
  - There is no missing data
  - Information can be located quickly
  - Information is grouped in meaningful ways
  - All information that is input is used
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- Input Screen Tests**
- Screen layout is logical for data entry
  - All information that needs to be captured, is captured
  - Input is speeded up by the use of dropdown lists, checkboxes etc.
  - Capture takes place at the appropriate time (e.g. after each field is completed, or after the page is reviewed)
  - Printouts are available where required
  - Search/lookup facilities work as expected
  - Add, change, delete, enquire functions are available
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- Processes**
- The functionality supports rather than impedes the business process
  - Are any business process changes required
  - What other processes will change
  - Is any flexibility being removed from business processes
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# User Acceptance Testing (UAT)

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**Overview** UAT is to test the system fulfils the business requirement as it stands today. It is not necessarily to confirm it meets the documented requirements. Sometimes, what was thought to be correct on paper may turn out to be incorrect when developed.

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**Report and Enquiry Function Tests**

- All field names are correct.
- The report/screen layout is appropriate and easy to read.
- Totals add up correctly.
- It meets the requirements as specified in the System Definition Report and/or Change Requests.

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**Input Screen Tests**

- Enter correct data in each field first.
- Next enter incorrect data into each field. Enter invalid dates, times, negative values, codes, etc.
- Try to ‘crash’ the system by entering invalid data and pressing invalid sequence of keys.
- Screens should have a consistent ‘look and feel’.
- It should be easy to navigate from one screen to next.
- Are there pull-down windows (pick lists) available where appropriate?
- Are function keys used consistently?
- Error messages and warnings should be meaningful and consistent.

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**Update Function Tests**

- Add a new record.
- Enquire on the new record.
- Change the record.
- Try adding invalid data to the new record.
- Delete the new record.

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**Security**

- Unauthorised users do not have access to the system.
- User has access to authorised menu options/functions.
- User has access to authorised data.
- User is only able to do authorised functions ie. insert, update, delete, enquire.

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**Process Testing**

- End to end processes give the correct result
- Aborting a process adjusts data already created
- The process updates all related data. E.g. processing an order decreases stock levels; a global change to credit terms is reflected in overdue accounts.

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**User**

**Documentation**

- Easy to follow.
  - Easy to navigate or find information.
  - Reflect what the system requires the user to do.
  - Puts a context around transactions
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**Hardware,  
Network,  
Printers**

- Test that all appropriate hardware, network and printers are available and function correctly.
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# Integration Testing

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## Overview

Integration testing is not expected to test every condition of the function. It is expected to test:

- Integration with other functions and programs.
  - Conformance to programming standards.
  - Consistent look and feel with other parts of the system, which have been previously implemented.
  - Performance characteristics e.g. Elapsed times of queries, movement of cursor etc.
  - Passing of information between systems
  - Access to data and functionality in other systems
  - Validity of data coming from, and passed to other systems
  - Consistency of data held in this and other systems.
  - Timing issues related to data transfer
  - Record locking
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# Performance or Stress Testing

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**Overview** This area is more likely to be tested by network and hardware engineers. Potentially some tools will be used to measure the system performance.

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**Areas to address** The following are some of the areas to be addressed.

- Bandwidth issues
- Performance over WAN
- Performance on machines with a minimum configuration
- Response time for enquiry
- Time to save records
- Response time for printing – particularly documents with graphics
- Time to load the System
- Performance under peak transaction volumes
- Performance whilst batch processes running
- Time for backup and restore
- Batch processing windows
- Month end and year end runs
- UPS performance
- Printer queues
- Crash recovery time
- Complex transaction processing
- Storage and retrieval of overnight reports
- Access to archived records
- Screen refresh times

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