

Test Plan For Accounts Payable System Version 1.0

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1. Test Plan Identifier

The plan identifier for this test plan of Accounts Payable System (APS) is Test Plan-v1.0. Its structure is based primarily on the IEEE 829-1998 Standard for Software Test Documentation

Revision History

Date	Version Number	Person	Description
04/25/2005	1.0	John	This is the initial test plan for Accounts Payable System (APS)

2. References

The following document will be referred which will serve as a basis for testing the system:

- Software Requirement Document – Revision 20

3. Glossary Of Terms

This section defines words and expressions used throughout this document

Word/Expression	Meaning
APS	Accounts Payable System
GL	General Ledger
QTP	QuickTest Professional
QC	Quality Center
M	Morning 7 am to 12 pm
D	Day 12 pm to 6 pm
B	Batch 6 pm to 11 pm

4. Introduction

The new Accounts Payable System (APS) shall be an interactive online check printing system that will support both U.S and foreign payees. The system shall provide daily and weekly reports and interface with General Ledger application.

The new APS system will be web based and available only to the company's intranet users, and support user authentication and permissions based on job role.

The availability and performance requirements are as follows:

- Availability of [M:99.5%, D:99.9%, B:100%] of the work day
- Able to print [M:8,700, D:10,000, B:15,000] checks per day
- Support [M:100, D:150, B:200] simultaneous users.

5. Objective

The objective of this test plan is:

- Define the strategy to perform the System Testing
- Communicate to all the stakeholders and distribute the responsibilities that they are to perform and the schedule they have to follow in performing the tasks.
- Define test tools and environment required to conduct the system test.
- Analyze the risks involved.
- Identify defects so that they are corrected.
- Provide overall direction for testing activities.
- Conduct testing to determine if all the requirements mentioned in the requirement specifications are satisfied.

6.Scope

6.1 Functions to be tested

- **Usability**
 - (i) Web based
 - (ii) Available only on company's intranet
- **Security**
 - (i) Login with username/ password
 - (ii) One job function per user
 - (iii) Privileges and access provided based on job function (role) as mentioned in the requirement document
- **System Availability**
 - (i) Availability of [M:99.5%, D:99.9%, B:100%] during work day.
 - (ii) Availability, Monday through Friday
 - (iii) Start and end of system calendar week to be the same as mentioned in requirement document
- **Data Entry**
 - (i) Enter payment information, view and edit payment information as per the job function roles as specified in the requirement specification.
 - (ii) Check payee data entry screen and for functionalities as per the requirement document
 - (iii) Enter and check Greeting Message as per the requirement document
- **Check Printing**
 - (i) Checks with face value equal to or less than \$1000 have one signature line.
 - (ii) Checks with face value more than \$1000 have two signature lines.
 - (iii) Country specific information, Greeting Message details, '\$' sign details as provided in the requirement document.
- **Reports**
 - (i) Weekly Report
 - (ii) Check Review

All reports are validated and checked if all the specifications specified on the requirement document are met.
- **Technical Requirements**
 - (i) System Performance
 - (ii) Hardware Requirements
 - (iii) Software Requirements
 - (iv) Interface Requirements

To check if all the requirements are met as per requirement document.

- **Data Element Definition**

To check if company standards are met for editing as per the requirement document.

6.2 Functions not to be tested

None

7. Schedule

Actual Testing will be conducted from May 27th 2005 to July 5th 2005

- Develop test plan, 4/28/2005 to 5/5/2005
- Review the test plan, 5/6/2005 to 5/7/2005
- Create test cases, 5/8/2005 to 5/13/2012
- Generate test data and setup a QA environment, 5/14/2005 to 5/20/2005
- Move the code to the QA environment, 5/21/2005 to 5/26/2005
- Execute tests in a simulated environment, 5/27/2012 to 6/10/2005
- Execute tests using target hardware and paper checks, 6/11/2005 to 6/18/2005
- Writing problem reports, 6/19/2005 to 6/21/2005
- Write summary report, 6/22/2005 to 6/24/2005
- Review meeting, 6/25/2005 to 7/5/2005

Note: June 25th to July 5th 2005 is the Buffer period

8. Approach

The following tests will be performed to check the functionalities listed in the Section 6.1 of this document. These tests also use tools listed in section 13 of this document. Any limitations in the system will also be detected.

8.1 Volume/Stress Test

Volume test involves subjecting the system to a heavy volume of data or users. Performance under these conditions is gauged.

The following specifications need to be checked:

8.1.1) The System shall print [M: 8700, D: 10,000, B: 15,000] checks per day

Methodology:

Use automated tools to print the following number of checks at different times of the day.

M: 1, 3, 42, 133, 2023, 8700

D: 2,5,54,345,5000,9600,10000

B: 8, 78,55,678,8900,15000.

8.1.2) The system shall support [M: 100 D: 150 B: 200] simultaneous users.

Methodology:

Use automated test tools to simulate multiple users at different times of the day.

M: 1, 5, 17, 52, 100

D: 3,6,28,55,104,125

B: 7,8,23,74,128,150

8.1.3) The availability of the system is checked according to the requirement specification.

[M: 99.5%, D: 99.9%, B: 100%].

Methodology:

Test availability by running the system for the following number of simulated workdays: 1,4, 7,10

8.2 Functional Test

The functional test ensures that all the functions specified in the requirement document are present and working in the system. The functions to be tested are listed in Section 6.1 of this document.

Methodology:

Check reports to make sure test cases for all the functions specified in section 6.1 are created and executed.

8.3 Environment Test

Environment tests are performed to ensure that the system works on the targeted hardware and software platforms.

The following specifications need to be checked:

- The system must run on company's AS400 platform
- To test with paper checks
- To check if the system is compatible with company's browser standards
- To check if system is web based and available only to company's intranet.
- To check if APS interfaces with GL Application.

Methodology:

A test lab having the systems with the required specifications is used to test if the systems work in targeted hardware and software platforms.

8.4 Security Test

Security test ensures that someone who is not authorized does not access the system.

The following specifications need to be checked:

- Test that access is available only on company's intranet
- Test that access is provided to users with proper user name/password
- Test that the system is available during the work day
- Test that each user can only have one job function
- Test that each job function has proper access & privileges based on the job function

Methodology:

- Attempt to access the system from unauthorized account by giving username and password other than company's intranet users.
- Attempt to obtain passwords of users by breaking the code.
- Attempts to access the system from outside of the physical location of the system.
- Check systems lockouts are functioning correctly.
- Attempts to access privileges that do not belong to the job function or role.

8.5 Recovery Test

Recovery test will force the system to fail in different ways and then gauge if recovery is properly performed.

The following specifications need to be checked:

- The system must be able to recover data using the backup files in case of a power failure or any hardware problem.
- The records on the system are not corrupted in the event of a power failure.

Methodology:

- Use failure simulator to emulate a power loss while the system is in use and check if system runs in less than 5 minutes.
- Make hardware to fail manually to check the recovery of the system.
- Also emulate network down time and connection errors using simulator while the system is in use

8.6 Beta Test

Beta testing is performed when the entire system is ready. This will involve giving the system to the APS and GL department employees to be used for quick feedback on the system as well as to report any defects.

8.7 User Acceptance Testing

The purpose of this test is to confirm that the system is developed according to the specified user requirements and is ready for operational use. The participants in this test are the Test team, AP department, GL department, Controller, IT Finance Tech Lead.

9. Dependencies

9.1 Software Dependencies

- The source code and supporting documents must be unit tested by the software developers - each functional unit of code is unit tested for basic i/o and error handling checks and provided to the testing team within the scheduled time outlined in the Project Schedule.

9.2 Personnel Dependencies

- The test team will require 3 clerks from the Accounts Payable department to perform Beta Tests.

10.Environmental Needs

The following tools will be needed for conducting the system tests:

10.1 Hardware

- AS400 platform
- 10 IBM PCs
- 10 printers
- 70,000 blank checks

10.2 Software

- QuickTest Professional (QTP), 5 licenses
- Quality Center, license for 25 users

10.3 Interface

- General Ledger (GL) application is set up well ahead so that APS shall interface with it.

10.4 Communication

- Interconnection to GL system

11. Resources and Responsibilities

11.1 Staffing Needs

- Project Manager
- Accounts Payable Supervisor
- General Ledger Accountant
- Development Lead
- Test Lead
- 10 Testers
- 3 Accounts Payable Clerks
- IT Finance Tech Lead

11.2 Roles & Responsibilities

Roles	Responsibilities
Project Manager	<ul style="list-style-type: none"> • Monitor the schedule of the entire project • Make all the important decisions about the project • Review and sign off the test plan • Member of CCB
Accounts payable supervisor and General Ledger accountant	<ul style="list-style-type: none"> • Coordinate the interaction with the AP/GL department • Assigning necessary resources required for Beta testing • Review and sign off the test plan • Participate in Acceptance testing • Member of CCB
Development Lead	<ul style="list-style-type: none"> • Coordinate the interaction with the development team • Perform the unit tests and provide the results of the unit test to the test plan • Conduct training for the staff • Review and sign off the test plan • Member of CCB
Test Lead	<ul style="list-style-type: none"> • Monitor all the tests performed • Coordinate the interaction with the test team • Coordinate the schedule, equipment and tools required for testing • Update the test Plan • Conduct tester training • Ensure the delivery of the test plan at the end of test phase • Member of CCB
Testers	<ul style="list-style-type: none"> • Write the test cases for the tests • Perform all the tests specified in the test plan
Clerks	<ul style="list-style-type: none"> • Perform Beta testing • Perform Acceptance testing
IT Finance Tech Lead	<ul style="list-style-type: none"> • Participate in Acceptance testing

11.3 Training Needs

- QTP for test team
- QC for test team and developers
- APS for test team
- GL for test team

12. Tools

- JIRA bug reporter tool for submitting problem report.
- Subversion (SVN) for source code management.
- Test scripts will be drafted on a word document and executed manually towards the application.
- Selenium, automated test tool to conduct regression testing.
- Java, Perl/shell scripting to develop automation tool.

13. Risks

13.1 Schedule Risks

(i) Description: When the project tasks and schedule are not well measured, then it may push testing beyond the forecasted completion time and the delivery of the whole project will be delayed.

Probability: Medium

Impact: High

Mitigation Strategy: A safety margin is added to ensure that the tasks can be completed on time. If additional time is needed for a task, the the buffer time is consumed.

(ii) Risk: Delay in completing the APS software development, causing the start of testing to be delayed.

Probability: Medium

Impact: High

Mitigation Strategy: Buffer time can be utilized; in worst cases Testing manager will assign extra resources to assist testing activities so that testing is completed on time.

13.2 Operational Risks

(i) Risk: No proper subject training

Probability: Low

Impact: Medium

Mitigation: Online and printed training methods are utilized.

(ii) Risk: No communication in team

Probability: Medium

Impact: Medium

Mitigation Strategy: Regular meetings are conducted to improve communication and the agenda and outcome of each meeting is shared across various teams involved in this activity.

13.3 Functionality Risks

(i) Risk: Risk of failure of functionality and performance of new system

Probability: Medium

Impact: High

Mitigation Strategy: In the event of failure of new system, the new system is run in parallel with the old system to ensure consistency.

14. Entrance Criteria

The criteria for System Testing:

- Complete software system developed and available.
- Unit and integration testing completed by development team.
- List of functions tested and not tested by development team.
- Review meeting conducted by development team and meeting minutes available.
- A software testing environment closely resembling the production environment must be available.

15. Problem Reporting

- As test cases are being executed, problem reporting is done simultaneously.
- When a problem is discovered, the tester will complete and submit a problem report to the Test Lead who will decide if the problem should be forwarded to the developers. Test Lead also eliminates duplicate problem report before forwarding.
- The Project Manager will officially close all reports when retesting is completed satisfactorily.
- At the end of the testing phase a summary report will be prepared and routed to appropriate individuals. This report contains the number of problems discovered, magnitude of the problems, and explanation of any existing problems

The defect severity and priority levels are defined as follows:

P1 – Critical (Functions missing)

P2 – High (Function not performing as required)

P3 – Medium (Errors that don't bring operation to a halt)

P4 – Low (Spelling errors)

16.Exit Criteria

- Execution of all test cases and completion of all system testing by testing team.
- Execution of beta testing by GL and AP department.
- No open P1 or P2 bugs
- If any medium priority P3 or low priority P4 errors are outstanding - Business Analyst must sign off the implementation risk as acceptable.
- Test summary report complete and signed off testing manager.
- System successfully deployed to the environment.
- All the planned requirements must be met and planned deliverables are ready.

17. Software Problem Report Template:

Software Problem Report Template

This section provides a sample template for reporting software problems that are discovered during the course of performing the test cases detailed in this document.

SOFTWARE PROBLEM REPORT

Problem Report ID _____

PROGRAM _____ RELEASE _____

VERSION _____

REPORT TYPE

- ☐ Coding Error ☐ Documentation
☐ Design Error ☐ Hardware
☐ Suggestion ☐ Query

SEVERITY

- ☐ Fatal
☐ Serious
☐ Minor

ATTACHMENTS: ☐ Yes ☐ No

If yes, list attachments

PROBLEM SUMMARY _____

CAN YOU REPRODUCE THE PROBLEM? (Y/N) ____

PROBLEM AND HOW TO REPRODUCE IT _____

SUGGESTED FIX (optional) _____

REPORTED BY _____

DATE ____/____/____

Items Below Are For Use Only By the Development Team

FUNCTIONAL AREA _____ ASSIGNED TO _____

COMMENTS _____

STATUS:

- ☐ Open ☐ Closed

PRIORITY

- ☐ High ☐ Medium ☐ Low

RESOLUTION:

- ☐ Pending ☐ Deferred ☐ Withdrawn by reporter
☐ Fixed ☐ As designed ☐ Need more info
☐ Irreproducible ☐ Can't be fixed ☐ Disagree with suggestion

RESOLUTION VERSION NO: _____

RESOLVED BY _____

DATE ____/____/____

RESOLUTION TESTED BY _____

DATE ____/____/____

TREAT AS DEFERRED: ☐ Yes ☐ No

18. Approval:

Test Manager

Name (in Print)	Signature	Date
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Development Manager

Name (in Print)	Signature	Date
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AP Chief Supervisor

Name (in Print)	Signature	Date
-----------------	-----------	------

AP Accountant

Name (in Print)	Signature	Date
-----------------	-----------	------

General Ledger Accountant

Name (in Print)	Signature	Date
-----------------	-----------	------

Controller

Name (in Print)	Signature	Date
-----------------	-----------	------

IT Finance Tech. Lead

Name (in Print)	Signature	Date
-----------------	-----------	------

Project Manager

Name (in Print)	Signature	Date
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19. Test Case Example:

<p style="text-align: center;">TEST CASE</p> <p>Test Case Number: TC_025 Date: 06/06/2005 Environment: AS400 Platform Tested By: Paul Product: Account Payable System Request Document Version: 20 Product Function: Check Printing Pass/Fail: Fail</p>
<p>Title: Check number of signature lines in checks based on face value of check amount</p>
<p>Entrance Criteria: “Check Amount” is entered in the ‘Payment Information Data Entry Screen’</p>
<p>Description: Checks with the face value less than or equal to \$1000 must print one signature line and checks with face value greater than \$1000 must print two signature lines.</p>
<p>Test Procedure:</p> <ol style="list-style-type: none">1. Enter the check amount as “2000”2. Enter the check amount as “2449”3. Enter the check amount as “750”4. Enter the check amount as “101”5. Enter the check amount as “239”6. Enter the check amount as “5”7. Enter the check amount as “9”8. Enter the check amount as “5550”9. Enter the check amount as “4337”10. Enter the check amount as “300000000”11. Enter the check amount as “234512”12. Enter the check amount as “1000” (Boundary Value Testing)

Expected Results:

1. System prints check with two signature line
2. System prints check with two signature line
3. System prints check with one signature line
4. System prints check with one signature line
5. System prints check with one signature line
6. System prints check with one signature line
7. System prints check with one signature line
8. System prints check with two signature line
9. System prints check with two signature line
10. System prints check with two signature line
11. System prints check with two signature line
12. System prints check with one signature line

Actual Results:

1. System prints checks with two signature line
2. System prints checks with two signature line
3. System prints checks with two signature line (Failure)
4. System prints checks with two signature line (Failure)
5. System prints checks with two signature line (Failure)
6. System prints checks with two signature line (Failure)
7. System prints checks with two signature line (Failure)
8. System prints checks with two signature line
9. System prints checks with two signature line
10. System prints checks with two signature line
11. System prints checks with two signature line
12. System prints checks with two signature line (Failure)

Comments:

1. The system is always printing checks with two signature lines
2. Check printing does not vary with according to face value