



# Edmonds Community College

## Test Plan

Prepared 5/10/14

Prepared by Team Unicorn:

Angela Hesse

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Ryan Neff



# Memorandum

To: Vice President Patrick Jay

From: Team Unicorn

Date: April 25th, 2014

Subject: Test Plan

The attached report contains the test plan for the automated contractor payment system at the Bank of Xanadu Bellevue Branch. Team Unicorn would like to review the test plan documentation with you on Saturday May 31st at the Bellevue Branch.



# **Bank of Xanadu**

## **Contractor Account Tracking**

### **Test Plan**

Prepared 5/10/14 Spring 2014

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## Introduction

The purpose of this test plan document is to present the software testing steps that will be used prior to the implementation of the new Contractor Account Tracking System. This document contains the following:

- **Testing Approach** – This section discusses the testing methods we have selected, as well as the benefits and risks of the selected method.
- **Test Environment** – This outlines the conditions that must exist prior to testing, and the corresponding critical success factors.
- **Test Scenarios** – This is a brief overview of the test scenarios that will be used to test the system. Each of the test scenarios has defined objectives, test conditions, test activities, and the expected results of those tests.
- **Sample Test Data** – Provides a brief overview of the importance of test data in the testing scenario, and the different types of data that will be used.
- **Appendix** – the Appendices will contain all of the supporting documentation pertaining to this project.

## Testing Approach

The three testing methods we will use to test the system are; black box testing, glass box testing, and user acceptance testing. Each testing method has advantages and disadvantages that contribute to the final assurance of a quality system.

### Glass Box Testing

The Team Unicorn developers will perform all Glass box testing, because test data is derived from direct examination of the code. Both static and dynamic analysis will be used, where deemed appropriate by the Team Unicorn developers.

#### Benefits

Because the developers have internal knowledge of the software, they can walk through the code line by line, and reason carefully through the implementation of the code to reveal errors.

#### Risks

Typically this is a very expensive method of testing, because larger projects can require a large amount of labor to manually review the code. Because of the limited scope of this project, we are able to implement glass box testing with the developers already employed by Team Unicorn.

### Black Box Testing

Team Unicorn members that are not directly responsible for software development will be performing black box testing. The black box testing will focus on the functional requirements, rather than examination of the code. The test cases found in Appendix A will be used to direct the black box testing.

#### Benefits

Multiple modules can be tested simultaneously, so black box testing is more effective for larger units of code. Because testing is performed from a users point of view, any functional requirement that is not met can be identified.

#### Risks

Black box testing may have some overlap with glass box testing, so there may be some unnecessary repetition of tests. There is also the risk of back-end code that is not accessible to the user will not get tested. Combining glass box testing with black box testing greatly reduces this risk.

## User Acceptance Testing

A designated group of bank of Xanadu representatives will perform user acceptance testing on June 14<sup>th</sup> during a live system walkthrough. These representatives familiarity with the system will be utilized to assist in training the other staff members when the system becomes operational on site.

### Benefits

The user acceptance testing ensures that all necessary features have been included in the final product.

### Risks

There is a risk that missing functional requirements will be identified during user acceptance testing. This risk has been greatly reduced by Team Unicorns strict adherence to standard practices and procedures outlined in the system development lifecycle.

## Test Environment

Several contributing factors are critical to a successful testing environment.

### Location

Because of the limited scope of the vendor payment system, all black box and glass box testing will be conducted at the team unicorn offices, and the user acceptance testing will be performed at the Bank of Xanadu Bellevue branch. These locations have been selected to minimize disruption to Bank of Xanadu's daily operations.

### Testing Hours

Black box and glass box testing will be conducted during normal business hours, because the testing will be performed at the Team Unicorn offices. However, the acceptance test will be conducted on Saturday June 14<sup>th</sup>, so that it will not interfere with Bank of Xanadu's normal business operations.

### How the tests will be Conducted

The black and white box testing will be conducted on Team Unicorns hardware, on a security-encrypted network. The testing setup used by Team Unicorn will mirror the hardware, software, and network available at the Bank of Xanadu Bellevue pilot branch. The acceptance test will be performed at the Bank of Xanadu pilot branch, and accordingly bank of Xanadu will be responsible for providing reasonable hardware and software support, as well as appropriate security measures.

### Personnel

Team Unicorn will provide the personal required for both the black box testing and the glass box testing. A specified Bank of Xanadu employee must perform the final acceptance testing. The designated employee must be authorized to approve acceptance of the final product.

### Readiness

Suitable test data is required to conduct all phases of testing. Team Unicorn will be generating the test data. The test data has been generated to mirror the sample data provided by Bank of Xanadu. A complete set of the test data can be seen in Appendix B. To prepare for the acceptance testing, Bank of Xanadu personnel that have been identified to participate in the "train-the-trainer" program must be trained before conducting the acceptance testing.

# Test Scenarios

Multiple testing scenarios have been created to ensure that the system works as designed. These can be found in Appendix A: Test Scenarios. Testing scenarios have been written for the following conditions:

<b>ID</b>	<b>SCENARIO</b>	<b>CONDITION</b>	<b>LEVEL</b>	<b>OBJECTIVE</b>
TS001	A new contract is received and needs to be entered into the system.	Proceed from the main menu and create a new contract record.	System	Verify that a new contract record can be created and saved into the system.
TS002	A new vendor record needs to be created.	Create a new vendor record from the new vendor screen.	Unit	Verify that a new vendor record can be created and saved from the new vendor screen.
TS002A	A new bank contact record needs to be created.	Create a new bank contact record from the new bank contact screen.	Unit	Verify that a new bank contact record can be created and saved from the new bank contact screen.
TS003	A contract exception memo needs to be created.	Entering a new contract with invalid data.	Unit	Verify that an contract exception memo will be created when invalid data is entered into the system.
TS004	A revised or updated contract needs to be entered into the system.	Updating a revised or updated contract from the contract record screen.	Unit	Verify that a contract can be updated and saved into the system.

TS005	A new invoice is received by the accountant.	Creating a new invoice record.	Unit	Confirm that a new invoice record can be entered and saved into the system.
TS006	An invoice exception memo needs to be created.	Entering a new invoice with invalid data.	Unit	Verify that an invoice exception memo will be created when invalid data is entered into the system.
TS007	An updated invoice needs to be entered into the system.	Updating an invoice from the invoice record screen.	Unit	Verify that an invoice can be updated and saved into the system.
TS008	The accountant receives an inquiry from a vendor about the status of a submitted invoice.	Doing a status inquiry from the invoice record screen.	Unit	Verify that an invoice status inquiry can be run from the invoice record screen.
TS009	An invoice has been approved and needs to be sent for payment processing.	Declaring an invoice is approved for payment.	Unit	Verifying the system is capable of approving an invoice for payment and creating a data entry sheet to be sent to A/P.
TS010	An invoice has been approved for payment too late to be paid this month and needs to be marked as accrued.	Marking an invoice as accrued from the invoice record screen.	Unit	Verify that an invoice can be marked as accrued and saved into the system.
TS011	Month end accounting reports need to be run.	Run accounting reports from the reports screen.	Unit	Verify that month end accounting reports can be run from within the system.

TS012	Month end management reports need to be ran.	Run management reports from the reports screen	Unit	Verify that month end management reports can be ran from within the system.
TS013	A user needs to logon to the system.	Logon to the system from the main menu.	System	Verify a user can logon to the system.
TS014	A user needs to navigate to the contract record screen.	Navigate to the invoice record screen from the main menu.	System	Verify that a user can navigate to the contract record screen.
TS015	A user needs to navigate to the invoice record screen.	Navigate to the invoice record screen from the main menu.	System	Verify that a user can navigate to the invoice record screen.
TS016	A user needs to navigate to the reports screen.	Navigate to the reports screen from the main menu.	System	Verify that a user can navigate to the reports screen.

## Sample Test Data

The existence of Sample Test Data is important because of the fact that a contract needs to be billed successfully from beginning to end. The point of the valid data is to test whether the software does what it is supposed to when all fields are filled out. The invalid data is to test whether or not it fails where the program is supposed to, thus requiring you to go back and fill out the form correctly. For purposes of this section of tests, it is a stand-alone product and integration testing is not required. In Appendix A, you will find our test scenarios. In Appendix B, you will find our sample test data that gives an example of each attribute and what data is considered valid or invalid.

# Appendices

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## Appendix A: Test Scenarios

<b>Scenario ID:</b> TS001		<b>Test Type:</b> System	<b>Tester:</b> Gregg	<b>Date:</b> 5/20/14	
<b>Scenario Name:</b>		Receive contract			
Background and Test Objective(s):		The accountant receives a new contract from the buyer and needs to enter it into the system. This test will determine if the contract can be successfully entered into the automated system.			
Related Use Cases or Test Scenarios:		UC001			
Testing Notes:		This test will examine both accurate and inaccurate data entry. Assume that the tester is logged into the system and at the main menu.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	A new contract has been received by the accountant and is ready to be entered into the system.	Proceed from main menu to the contract entry screen.	User should be taken to the contract entry screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above- vendor number needs to be located.	Position cursor in the Vendor field and search for the correct vendor. Start typing vendor ID and select correct vendor when name appears.	The vender name should appear and be able to be selected.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	Remaining contract information needs to be entered into the system.	Complete all other required fields with valid test data.	Contract record fields should accept all valid test data.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04	See above.	Complete all other required fields with invalid test data.	System should generate "Invalid Entry" and not accept data.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
05	New contract has been entered successfully and is ready to be saved into the system.	Select save on the contract entry screen.	A new contract record has been successfully saved into the system.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					

Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b>					
<input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					
<b>Scenario ID: TS002</b>		<b>Test Type: Unit</b>		<b>Tester: Gregg</b>	
<b>Date: 5/20/14</b>					
<b>Scenario Name:</b>		Create new Vender record.			
Background and Test Objective(s):		The accountant needs to enter a new vendor(contractor) into the system.			
Related Use Cases or Test Scenarios:		UC002			
Testing Notes:		This test will examine both accurate and inaccurate data entry. Assume that the tester is logged onto the system and is at the vendor record screen			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The account needs to create a new vendor record	Select "create new record"	User should be taken to new vender entry screen	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	User completes all required entries with valid data and saves the new vendor record.	A new vendor record has been completed successfully.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	See above.	User completes all required entries with invalid data and saves the new vendor record.	System should error messages where invalid data has been entered.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					

Tests Completed by: _____	Date Conducted: _____
Reviewed by: _____	Date Reviewed: _____
<b>Corrective Actions:</b>	
<input type="checkbox"/> Passed: No further action required	(Date: _____, Initials: _____)
<input type="checkbox"/> Errors Submitted for Correction	(Date: _____, Initials: _____)
<input type="checkbox"/> Errors Corrected	(Date: _____, Initials: _____)
<input type="checkbox"/> Retested	(Date: _____, Initials: _____)
<input type="checkbox"/> Other:	

<b>Scenario ID:</b> TS002A	<b>Test Type:</b> Unit	<b>Tester:</b> Gregg	<b>Date:</b> 5/20/14		
<b>Scenario Name:</b>	Create new Bank contact record				
Background and Test Objective(s):	The accountant needs to enter a new bank contact into the system.				
Related Use Cases or Test Scenarios:	UC002				
Testing Notes:	This test will examine both accurate and inaccurate data entry. Assume that the tester is logged onto the system and is at the bank contact record screen				
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The account needs to create a new bank contact record	Select "create new record"	User should be taken to new bank contact entry screen	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	User completes all required entries with valid data and saves the new bank contact record.	A new bank contact record has been completed successfully.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

03	See above.	User completes all required entries with invalid data and saves the new new bank contact record.	System should error messages where invalid data has been entered.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

<b>Scenario ID:</b> TS003	<b>Test Type:</b> Unit	<b>Tester:</b> Gregg	<b>Date:</b> 5/20/14
<b>Scenario Name:</b>	Contract exception.		
Background and Test Objective(s):	This test will determine if an exception memo can be created when a contract with invalid or incomplete data is "saved" into the system.		
Related Use Cases or Test Scenarios:	UC003		

Testing Notes:		This test will examine if an exception memo can be generated when a contract record is saved with missing or invalid data. Assume that the tester is logged onto the system and is at the contract entry screen.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	A new contract has been received that has invalid or missing data.	User enters the contract data as completely as they can and selects "save".	Error message appears and prompts user to create an exception memo.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	User selects "create exception memo"	A memo screen opens and user can complete the memo and inform the buyer of the missing or invalid data.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

<b>Scenario ID: TS004</b>		<b>Test Type: Unit</b>	<b>Tester: Gregg</b>	<b>Date: 5/20/14</b>	
<b>Scenario Name:</b>		Update Contract			
Background and Test Objective(s):		An updated or revised contract needs to be entered into the system. This test will determine if an existing contract can be successfully updated.			
Related Use Cases or Test Scenarios:		UC004			
Testing Notes:		This test will determine if an existing contract record can be updated or revised. Assume the tester is logged into the system and at the contract record screen.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	A revised or updated contract has been delivered to the accountant.	Select edit contract. Position cursor over the contract number field and select the correct contract from the list.	The original contract opens and is ready to be updated.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above	User will enter correct data or update needed data and save the revised contract.	The updated contract is saved into the system.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					

**Corrective Actions:**

- Passed: No further action required (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Errors Submitted for Correction (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Errors Corrected (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Retested (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Other:

<b>Scenario ID: TS005</b>		<b>Test Type: Unit</b>	<b>Tester: Gregg</b>	<b>Date: 5/20/14</b>	
<b>Scenario Name:</b>		Receive Invoice			
Background and Test Objective(s):		The accountant receives a payment invoice from the vender and needs to enter the information into the system. This test will determine if the invoice can be successfully entered into the system.			
Related Use Cases or Test Scenarios:		UC005			
Testing Notes:		This test will examine the input of valid data. Assume that the user is logged onto the system and is at the invoice record screen.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	An invoice has been received by the accountant that needs to be entered into the system.	Search for and select the vendor ID listed on the contract.	User should be able to successfully enter the contract ID into the system.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	Search for and select the contract ID listed on the contract.	User should be able to successfully enter the contract ID into the system.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	See above.	User enters the remaining invoice information into the system..	The user should be able to successfully enter all of the remaining information the system.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

04	All invoice information has been entered into the system.	The user clicks the run system button and all entries are checked for validity, including hourly rate, date, and fee maximum.	The system should verify all entries are within the contract parameters and "approve" the invoice.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b>					
<input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other:					

<b>Scenario ID: TS006</b>	<b>Test Type: Unit</b>	<b>Tester: Gregg</b>	<b>Date: 5/21/14</b>		
<b>Scenario Name:</b>	Invoice Exception				
Background and Test Objective(s):	The accountant receives an invoice and notices there is invalid or missing data. This test will determine if an exception memo can be generated from the invoice entry screen.				
Related Use Cases or Test Scenarios:					
Testing Notes:	This test will examine invalid data entry. Assume that the tester is logged onto the system and at the invoice entry screen.				
<b>Case</b>	<b>Test Condition(s)</b>	<b>Test Activities</b>	<b>Expected Results/Notes</b>	<b>Actual Results</b>	<b>/Notes</b>
01	An invoice has been received and upon examination, the accountant	The tester enters all the information from the invoice into the system. Including entering	System will accept all entries.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	



	notices that some of the data is missing or invalid.	missing/invalid when needed. And selecting "Do not pay" in the payment status box.			
02	All information has been inputted into the system.	The user selects process invoice.	The system will determine that all parameters of invoice are not valid and will generate an exception memo to be returned to the buyer with the invoice for resolution.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	See above	The user will select save invoice.	The system will save a record of the invoice.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

Testing Notes:

Tests Completed by: \_\_\_\_\_ Date Conducted: \_\_\_\_\_

Reviewed by: \_\_\_\_\_ Date Reviewed: \_\_\_\_\_

**Corrective Actions:**

- Passed: No further action required (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Errors Submitted for Correction (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Errors Corrected (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Retested (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Other:

<b>Scenario ID: TS007</b>	<b>Test Type: Unit</b>	<b>Tester: Gregg</b>	<b>Date: 5/21/14</b>
<b>Scenario Name:</b>	Update Invoice		
Background and Test Objective(s):	An updated or revised invoice needs to be entered into the system. This test will determine if an existing invoice can be successfully updated.		



Related Use Cases or Test Scenarios:		UC007			
Testing Notes:		This test will determine if an existing invoice record can be updated or revised. Assume the tester is logged into the system and at the invoice record screen.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	A revised or updated invoice has been delivered to the accountant.	Select edit invoice Position cursor over the contract number field and select the correct contract from the list.	The original contract opens and is ready to be updated.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above	User will enter correct data or update needed data, and select check invoice.	The system will verify all entries are valid and values fall within contract specifications.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	See above.	User will change pay status to approve for payment and select save invoice.	The system will save the invoice.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b>					
<input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other:					

<b>Scenario ID: TS008</b>	<b>Test Type: Unit</b>	<b>Tester: Gregg</b>	<b>Date: 5/22/14</b>		
<b>Scenario Name:</b>	Invoice Status Inquiry				
Background and Test Objective(s):	The accountant has receive an inquiry from a vendor about the payment status of a certain invoice. This test will determine if the user can check the status of invoice inside the system.				
Related Use Cases or Test Scenarios:	UC008				
Testing Notes:	This test will examine the process of checking the payment status of an invoice. Assume the user is logged onto the system and is at the invoice record screen.				
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The accountant has received a inquiry from a vendor about the payment status of a certain invoice.	The user will select "check status" and search for the invoice in the system.	System will accept the invoice record search and display the desired record if it is in the system..	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	The user will note the payment status and Make a note of the vendor inquiry in the notes section and resave the record.	The system should accept the record with the information added and save into the system.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	The user cannot find the invoice in the system.	The user searches for an invoice record and cannot find it in the system. The user selects send email to notify the vendor to resubmit the invoice.	The system should allow the user to send email message to the vendor.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					

**Corrective Actions:**

- Passed: No further action required (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Errors Submitted for Correction (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Errors Corrected (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Retested (Date: \_\_\_\_\_, Initials: \_\_\_\_\_)
- Other:

<b>Scenario ID:</b> TS009	<b>Test Type:</b> Unit	<b>Tester:</b> Gregg	<b>Date:</b> 5/21/14		
<b>Scenario Name:</b>	Pay Invoice				
Background and Test Objective(s):	This test will determine if an invoice can be saved as "paid" and a data entry sheet can be generated and printed.				
Related Use Cases or Test Scenarios:	UC009				
Testing Notes:	Assume the user is logged in and is at the invoice record screen.				
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The user needs to mark an invoice as paid and print a data entry sheet	The user locates the invoice and verifies the pay status of the invoice is approved.	The system should be able to display the invoice record.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above	The user enters the current date into the date paid field on the record and saves the record.	The system should accept the new information and save the record.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	See above.	The user selects print data entry sheet. Then selects the invoice to be accessed.	The system should print a data entry sheet to be sent with the invoice to A/P	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

Testing Notes:
Tests Completed by: _____ Date Conducted: _____
Reviewed by: _____ Date Reviewed: _____
<p><b>Corrective Actions:</b></p> <p><input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____)</p> <p><input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____)</p> <p><input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____)</p> <p><input type="checkbox"/> Retested (Date: _____, Initials: _____)</p> <p><input type="checkbox"/> Other:</p>

<b>Scenario ID:</b> TS010	<b>Test Type:</b> Unit	<b>Tester:</b> Gregg	<b>Date:</b> 5/21/14		
<b>Scenario Name:</b>	Accrue Invoice				
Background and Test Objective(s):	The invoice has been marked approved too late to be paid in the current month. It needs to be accrued until the following month. This test will determine if the invoice record can be saved as "Accrued".				
Related Use Cases or Test Scenarios:	UC010				
Testing Notes:	Assume the user is logged onto the system and is at the invoice record screen.				
<b>Case</b>	<b>Test Condition(s)</b>	<b>Test Activities</b>	<b>Expected Results/Notes</b>	<b>Actual Results</b>	<b>/Notes</b>
01	An invoice needs to be accrued until the following month.	User accesses the desired invoice record and views the date in the "date paid" field.	The system should allow the user to access the record and view its information.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

02	See above.	The user verifies that the date in the "date paid" field is past the cut-off date for the current month's checkrun by A/P. Then enters the current date in the "Date Accrued" field and saves the invoice record.	The system should accept the new data and save the invoice record.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

<b>Scenario ID:</b> TS011	<b>Test Type:</b> Unit	<b>Tester:</b> Gregg	<b>Date:</b> 5/21/14
<b>Scenario Name:</b>	Run Accounting Reports		
Background and Test Objective(s):	At month end the accounting department needs to run their monthly reports. This test will determine if the month end accountings reports can be ran directly from the automated system		

Related Use Cases or Test Scenarios:		UC011			
Testing Notes:		This test will test the system's capability to run the month end accounting reports. Assume that the user is logged onto the system and at the reports menu.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The user needs to run and print the General Ledger Expense report.	The user selects the G/L Expense option on the reports menu.	The system should open the G/L Expense screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	The user enters the current reporting period dates and selects print report.	The system should run and print the desired reports.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	The user needs to run and print the Accruals report.	The user selects the Accruals option on the reports menu.	The system should open the Accruals screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04	See above.	The user enters the current reporting period dates and selects print report.	The system should run and print the desired reports.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

<b>Scenario ID: TS012</b>		<b>Test Type: Unit</b>	<b>Tester: Gregg</b>	<b>Date: 5/21/14</b>	
<b>Scenario Name:</b>		Run Management Reports			
Background and Test Objective(s):		At month end the accounting department needs to run the monthly reports for management. This test will determine if the month end management reports can be ran directly from the automated system.			
Related Use Cases or Test Scenarios:		UC012			
Testing Notes:		This test will test the system's capability to run the month end Management reports. Assume that the user is logged onto the system and at the reports menu			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The user needs to run and print the Programmer Expense report.	The user selects the Programmer Expense option on the reports menu.	The system should open the Programmer Expense screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	The user enters the current reporting period dates and selects print report.	The system should run and print the desired reports.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	The user needs to run and print the Fee Maximum report.	The user selects the Fee Maximum option on the reports menu.	The system should open the Fee Maximum screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04	See above.	The user enters the current reporting period dates and selects print report.	The system should run and print the desired reports.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
05	The user needs to run and print the Contract Recap report. um	The user selects the Contract Recap option on the reports menu.	The system should open the Contract Recap screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
06	See above.	The user enters the current reporting period dates and selects print report.	The system should run and print the desired reports.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					

Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b>					
<input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					
<b>Scenario ID: TS013</b>		<b>Test Type: System</b>		<b>Tester: Gregg</b>	
<b>Scenario Name:</b>		Logon			
Background and Test Objective(s):		A user must logon to the system. This test will see if a user can successfully logon to the system.			
Related Use Cases or Test Scenarios:		N/A			
Testing Notes:		This test will examine both valid and invalid user names and passwords.			
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The User needs to logon to the system.	The user turns on the system.	The system powers up and displays the logon screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02	See above.	The user enters a valid user name and password.	The system logs on the user and displays the "Main Menu".	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03	See above.	The user enters a valid user name and an invalid password.	The system displays "Invalid User name or Password"	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04	See above.	The user enters a invalid user name and an valid password.	The system displays "Invalid User name or Password".	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					

Tests Completed by: _____	Date Conducted: _____
Reviewed by: _____	Date Reviewed: _____
<b>Corrective Actions:</b>	
<input type="checkbox"/> Passed: No further action required	(Date: _____, Initials: _____)
<input type="checkbox"/> Errors Submitted for Correction	(Date: _____, Initials: _____)
<input type="checkbox"/> Errors Corrected	(Date: _____, Initials: _____)
<input type="checkbox"/> Retested	(Date: _____, Initials: _____)
<input type="checkbox"/> Other:	

<b>Scenario ID:</b> TS014	<b>Test Type:</b> System	<b>Tester:</b> Gregg	<b>Date:</b> 5/21/14		
<b>Scenario Name:</b>	Navigate to Contract Records				
Background and Test Objective(s):	The user needs to access the Contract records screen.				
Related Use Cases or Test Scenarios:	N/A				
Testing Notes:	Assume the user is logged on to the system and is at the main menu.				
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The user needs to access the contract record screen.	The user selects Contract Records from the main menu.	The user is taken to the Contract Records screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

03				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

<b>Scenario ID:</b> TS015	<b>Test Type:</b> System	<b>Tester:</b> Gregg	<b>Date:</b> 5/21/14
<b>Scenario Name:</b>	Navigate to Invoice Records		
Background and Test Objective(s):	The user needs to access the Contract records screen.		
Related Use Cases or Test Scenarios:	N/A		
Testing Notes:	Assume the user is logged on to the system and is at the main menu.		



Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The user needs to access the invoice record screen.	The user selects Invoice Records from the main menu.	The user is taken to the Invoice Records screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

<b>Scenario ID:</b> TS016	<b>Test Type:</b> System	<b>Tester:</b> Gregg	<b>Date:</b> 5/21/14
<b>Scenario Name:</b>	Navigate to the Reports screen.		

Background and Test Objective(s):	The user needs to access the Reports screen.				
Related Use Cases or Test Scenarios:	N/A				
Testing Notes:	Assume the user is logged on to the system and is at the main menu.				
Case	Test Condition(s)	Test Activities	Expected Results/Notes	Actual Results	/Notes
01	The user needs to access the Reports screen.	The user selects Reports from the main menu.	The user is taken to the Reports screen.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
02				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
03				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
04				<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Testing Notes:					
Tests Completed by: _____ Date Conducted: _____					
Reviewed by: _____ Date Reviewed: _____					
<b>Corrective Actions:</b> <input type="checkbox"/> Passed: No further action required (Date: _____, Initials: _____) <input type="checkbox"/> Errors Submitted for Correction (Date: _____, Initials: _____) <input type="checkbox"/> Errors Corrected (Date: _____, Initials: _____) <input type="checkbox"/> Retested (Date: _____, Initials: _____) <input type="checkbox"/> Other: _____					

## Appendix B: Sample Test Data

ENTITY	ATTRIBUTE	VALID DATA	INVALID DATA
CONTACTS	Contact_ID	0001, 0002, 0003, any valid combo of 0123456789	John, Jim, Kat, Gregg, Angela, Vitor, abcdefghijklmnopqrstuvwxyz;~!@#%&*( )_+={ []\<>?:";\, or any combination of these characters
	Contact_F_Name	Ryan, Jim, Kat, Gregg, Angela, Vitor, Kali, Sal, Rune, any valid alpha characters a-z	<u>Ry@n, J1m, K^t, [, 1234567890~!@#%&amp;*( )_+={ []\&lt;&gt;?:";\, or any combination of these characters</u>
	Contact_L_Name	Neff, Hesse, Ratliff, Ferguson, Savitzky, any valid combo of alpha characters	<u>N#ff, R@tcl1ff, Fergus0n, S^v1tzky, He##se, ;~!@#%&amp;*( )_+={ []\&lt;&gt;?:";\, or any combination of these characters</u>
	Contact_Phone	anything in the format of (###)-(###)-(####)	(1234)-(!!!!)!!!!
	Contact_Email	john@gds.com, jd51@abc.org.ca, Johngds.com, john@gd.com	john@g&3com, jd61@5*com, jpa1#%^com
	Unit_ID	Any valid combination of 1234567890 and a-z	System-generated, no invalid data
CONTRACTS	Contract_ID	001, 002, 003, any valid combination of 0123456789	00!, 00#, abcdefghijklmnopqrstuvwxyz;~!@#%&*( )_+={ []\<>?:";\, abcdefghijklmnopqrstuvwxyz; or any combination of these characters
	Cont_Number	001, 002, 003, any valid combination of 0123456789	00!, 00#, abcdefghijklmnopqrstuvwxyz;~!@#%&*( )_+={ []\<>?:";\, abcdefghijklmnopqrstuvwxyz; or any combination of these characters
	Cont_Start_Date	02/11/2014	The words "January 14 2015"

		or anything in that format	
	Cont_End_Date	02/11/2014 or anything in that format	The words "January 14 2015"
	Cont_Fee_Max	\$24000.00or any amount in that format	Two Thousand Dollars and 98 cents
	Cont_Hourly_Rate	\$240.00or any amount in that format	Two Thousand Dollars and 98 cents
	Cont_Description	any valid combination of abcdefghijklmnopqrstuvwxy z	123456789
	Cont_Notes	any valid combination of abcdefghijklmnopqrstuvwxy z	,\$%,@#!#(\$)=-
	Vendor_ID	ZZ0015, or any combination of letters/numbers in that format	System-generated, no invalid data
	Unit_ID	Antho0308, or any combination of letters/numbers in that format	System-generated, no invalid data
	Contact_ID	001, 002, 003, any valid combination of 0123456789	System-generated, no invalid data
	Employee_ID	001, 002, 003, any valid combination of 0123456789	System-generated, no invalid data



	Programmer_ID	001, 002, 003, any valid combination of 0123456789	System-generated, no invalid data
DIVISIONS	Division_ID	BAS, NAB, SAS, AAB, EDC, SEA, SAN	Anything that is not one of those values
	Div_Name	accounting, departments payable, programming, etc	\$\$*GH!O)))
EMPLOYEES	Employee_ID	001, 002, 003, any valid combination of 0123456789	System generated
	Emp_F_Name	Kat, James, Ryan, John, Gregg	K^t, Jo%n, R8yan, J0hn, Gre11
	Emp_L_Name	Savitzky, Ratcliff, Neff, Fergusen	Sav1tzk\$, Ra11cli%%, N\$Ff, Ferg90sen
	Emp_Contact	Any valid combination of 1234567890 and a-z	!)GH!!(*&
	Emp_User_Name	System- generated	System-generated, no invalid data
	Emp_Password	System- generated	System-generated, no invalid data
	Emp_Auth_Level	System- generated	System-generated, no invalid data
	Emp_Category	System- generated	System-generated
INVOICES	Invoice_ID	000000, or any valid 6 digit combination	00\$5!^, !!!!!, ^&!()(. etc.
	Inv_Number	System- generated	System-generated, no invalid data
	Inv_Date_Issued	System- generated	System-generated, no invalid data
	Inv_Date_Received	System- generated	System-generated, no invalid data
	Inv_Date_Paid	System-	System-generated, no invalid data

		generated	
	Inv_Terms	any valid combination of abcdefghijklm nopqrstuvwxyz z	00\$5!^, !!!!!, ^&!()(), etc.
	Inv_Amount	Any valid numeric value in the format of \$00.00	00\$5!^, !!!!!, ^&!()(), etc.
	Inv_Rate	Any valid numeric value in the format of \$00.00	00\$5!^, !!!!!, ^&!()(), etc.
	Inv_Hours		00\$5!^, !!!!!, ^&!()(), etc.
	Inv_Start_Date	System-generated	System-generated, no invalid data
	Inv_End_Date	System-generated	System-generated, no invalid data
	Inv_Status	Active/Inactive	
	Inv_Accrual	Any valid numeric value in the format of \$00.00	
	Inv_Notes	any valid combination of abcdefghijklm nopqrstuvwxyz z	numeric characters 0123456789
	Vendor_ID	ZZ0015, or any combination of letters/numbers in that format	System-generated, no invalid data
	Employee_ID	System-generated	System-generated, no invalid data
	Contract_ID	System-generated	System-generated, no invalid data
PROGRAMMERS	Programmer_ID	System-generated	System-generated, no invalid data
	Prog_F_Name	John, Kat, Ryan, Angie	K^t, Jo%n, R8yan, J0hn, Gre11

	Prog_L_Name	Savitzky, Ratcliff, Neff, Fergusen	Sav1tzk\$, Ra11cli%%, N\$Ff, Ferg90sen
	Vendor_ID	System-generated	System-generated, no invalid data
UNITS	Unit_ID	System-generated	System-generated, no invalid data
	Unit_Number	System-generated	System-generated, no invalid data
	<i>Division_ID</i>	BAS, NAB, SAS, AAB, EDC, SEA, SAN	Anything that is not one of those values
VENDORS	Vendor_ID	ZZ0015, or any combination of letters/numbe rs in that format	System-generated, no invalid data
	Ven_Name	any valid combination of abcdefghijklm nopqrstuvwxyz z	00\$5!^, !!!!!, ^&!()(), etc.
	Ven_Number	System-generated	System-generated, no invalid data
	Ven_Address	Any valid combination of 1234567890 and a-z	00\$5!^, !!!!!, ^&!()(), etc.
	Ven_Phone	anything in the format of (###)-(###)- (####)	(1234)-(!!!!)!!!!
	Ven_Email	john@gds.com , jd51@abc.org. ca, Johngds.com, john@#gd.co m	john@g&3com, jd61@5*com, jpa1#\$\$%^com