Test Case Standards that Exemplify Test Objectives

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Thinking about Your Test Objectives

- What are the objectives of your testing?
- What is important to your organization?
- Why do we test?
- What is the standard by which the system should function?
- Who will execute test cases? How frequently do your testers change? How complex is your application?
- Will you have alternative uses for your test cases?
- How do you plan your work?

Determine Your Test Objectives – 1 of 5

What are the most important characteristics of your test cases?

- Support regular releases
- Execute one time
- Audit Requirements
- Time to market

Our Test Objective #1: Repository will contain modular test cases that are

- Precise and accurate
- Easily maintainable
- Singular focused to provide flexibility to current and future testing events by allowing the tester to mix-and-match test cases in different test sets
- Support defect retesting in that all steps in the test case are relevant to the single objective

Determine Your Test Objectives – 2 of 5

Who will execute test cases? How frequently do your testers change? How complex is your application?

- Rate of turn-over
- Offshore team
- Monkey at keyboard
- Specialized knowledge

Our Test Objective #2: Be executable by any tester on the QA or Functional teams with the same results as a knowledgeable tester (if SQL is used, basic SQL only; every tester should be able to understand the SQL they are running, not just run it)

Determine Your Test Objectives – 3 of 5

Will you have alternative uses for your test cases?

- Training
- System documentation

Our Test Objective #3: Support on-boarding of new QA team members by allowing them to execute test cases to learn the system.

Determine Your Test Objectives – 4 of 5

What is the standard by which the system should function?

- Functional Specifications
- Business Needs
- Meet Regulatory Requirements

Our Test Objective #4: Validate the system functions as required by the business and identify defects that impact their ability to do their jobs.

Determine Your Test Objectives – 5 of 5

How do you plan and estimate work?

- Test Case
- Functional Specification
- Release Date

Our Test Objective #5: Support the resource estimation model for test case preparation and execution.

Application of Objective #1: Test Case Naming Standard

Verify **<TC Expected Results>** *when* **<TC Execution Conditions>**

Original Wording of Test Case Title:

Verify when updating Carrier Profile in OFS and change the City field, the profile is updated properly with no errors generated on the screen.

Apply syntax:

TC Execution Condition	TC Expected Results
User changes Carrier City	OFS updates Carrier Profile with no errors

Revised Wording of Test Case Title:

Verify OFS updates Carrier Profile with no errors *when* user changes Carrier City

Application of Objectives 1, 2 and 3: Test Case Standards

Test Case Name, Purpose, Prerequisites must meet the following standards:

1. The test name and purpose must be consistent and the purpose must state what the test will validate.
2. The purpose of the test must validate a single functional objective.
3. The prerequisites must be complete.
4. The prerequisites must not contain lists of test cases to be executed. In the event that another test case will satisfy a prerequisite, the condition that results from the execution of the test case should be listed as a prerequisite (the test case id may follow in parentheses).
5. The purpose must not have any conditional statements.

Application of Objectives 1, 2 and 3: Test Case Standards

Detailed Test Steps must meet the following criteria:

1. Every field and form/page that the tester must act on must be specifically named within the test steps.
2. It must be possible for a tester that has only basic knowledge of the application to execute the test. As a result, the test steps must tell the tester specifically what actions to take rather than giving general directions (e.g., “Find the Employee” must be “Click F11. Enter First Name and Last Name of employee with salary equal to $95000.01. Click CTRL-F11.”)
3. There must be a clear transition between steps including all button clicks (e.g., click “Next”, click “Save”, click “OK”.)
4. The detailed test steps must not contain any conditional statements (e.g., if this, then do this...).

Application of Objectives 1, 2 and 3: Test Case Standards

Detailed Test Steps must meet the following criteria:

5. The detailed steps must not contain optional steps.
6. The detailed test steps must not contain loops (e.g., Step 12 = Repeat Steps 7 - 11).
7. The expected results must be clear and contain the exact message or system state expected (e.g., Message Line says "Transaction Complete: 1 records applied and saved.").
8. The expected results must be definite (e.g., they do not contain "should").
9. The data values must be described rather than specifically stated in the test steps. Described data can be retrieved by the tester at time of execution. For example, enter login id and password of a user with Purchase Order Approval responsibility, enter the item number to be purchased that does not have sufficient inventory quantity for immediate shipping.

Test Case Standards in Practice – Example #1

Purpose: Verify the HCE DFF is set to Yes for employees with a salary of $95,000.01 per year after file is sent to Oracle.
Prerequisite: Interface employee with a salary of $95,000.01

Name	Description	Expected Result
Step 1	Enter the User Name and Password for a user that can view employee benefits. Click “Login”. Select “USGU Benefits Responsibility”	User home page is displayed. Functions for the selected responsibility appear in the middle half of the screen.
Step 2	Choose the function People -> Enter and Maintain	The 'Global Values' form appears along with a 'Decision' box asking you whether or not you want to change the effective date.
Step 3	Select “No” to change Effective Date.	Pop-up box is closed and Employee Search form is displayed.
Step 4	Enter the First Name and Last Name of employee with salary = $95,000.01. Click Find	The employee is returned on the People form
Step 5	Click on Others> Extra Information. Verify HCE Flag = ‘Yes’	HCE Flag = Yes

Test Case Standards in Practice – Example #1

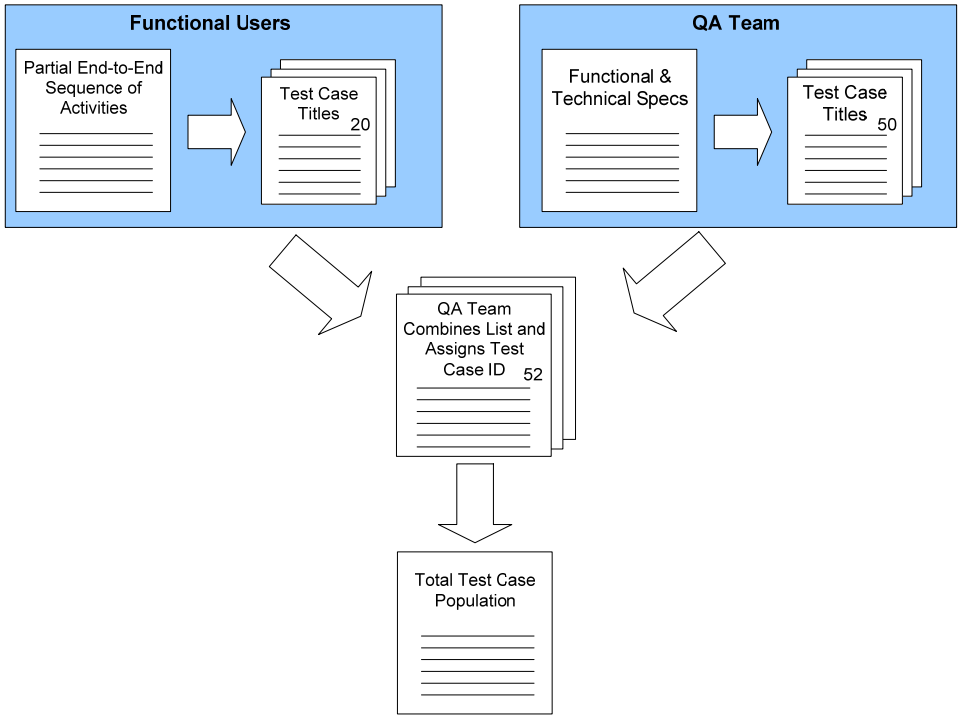
Purpose: Verify ability to terminate a worker using the Professional User Interface (PUI).
Prerequisite: a.) Worker is an active employee; b.) User has PUI access

Name	Description	Expected Result
Step 1	Enter USER ID and PASSWORD for user that can access to the People form. Click “Login” button. Select the Responsibility required to edit the People form.	Login information is entered, Oracle application is launched. User home page is displayed. Functions for the selected responsibility appear in the middle half of the screen.
Step 2	Navigate to People -> Enter and Maintain	The ‘People' form appears along with a 'Decision' box asking you whether or not you want to change the effective date.
Step 3	Respond to the DateTrack Reminder by entering the Effective Date = <today>	DateTrack is set and Employee Search form is displayed.
Step 4	Enter the First Name and Last Name of employee to be terminated. Click Find.	The employee is returned on the People form
Step 5	Click on ‘Others’ button and choose ‘End Employment’ from list of values.	End Employment is selected and the form appears.
Step 6	Enter Termination Details – ‘Reason’, ‘Actual Termination Date’, ‘Last Standard Process Date’, ‘Lighthouse Immediate Termination Flag’ = ‘Yes’. Click ‘OK’.	The termination details are entered in the appropriate fields and the ‘End Employment’ form closes.
Step 7	Click ‘Terminate’ button on the lower portion of the form. Click ‘OK’ when the element entry warning message comes up.	Message appears in the status bar displaying, 'FRM-40400: Transaction complete: 1 records applied and saved’.

Application of Objective #4: Define Total Test Case Population

Define Total Test Case population

Functional users will think about sequences of activities they will want to perform and identify test cases needed to complete those sequences. The QA team will decompose the functional and technical specifications to title test cases. The two lists will be merged to come up with the total test population.

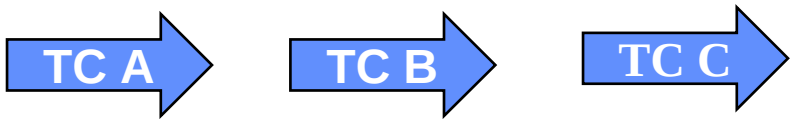


Application of Objectives 1 and 4: Benefits of Modular Test Cases

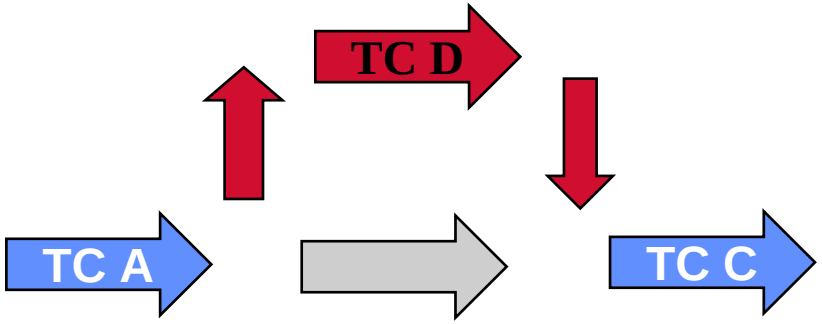
- Provide opportunity to exhaustively test high-risk areas
- Reuse test cases for different types of data
- Modify a single test case for functionality changes
- Reduce the amount of time required to isolate, investigate, and re-test defects
- Continue to build up more complete scenarios and not add additional time to write these scenarios
- Use the prioritized population of total test case titles to make informed, risk-based decisions

Application of Objectives 1 and 4: Using Modular Test Cases to Create Scenarios

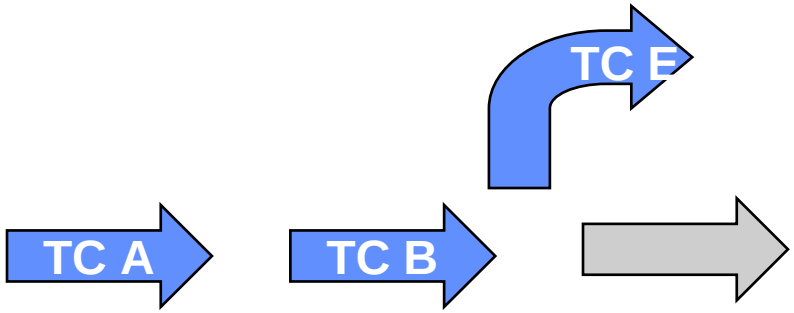
Primary Scenario



Alternate Scenario



Exception Scenario



Application of Objective #5: Metrics and Estimates

Reviewing functional specification and writing test titles from a functional specification takes 3 hours

Each Interface or Extension will generate 35 test cases

Each Report item will generate 15 test cases

Each Test Case will take 30 minute to write and 30 minute to execute

Each Tester can execute 75 test cases per week

Each Test Case will be executed 2 times during a testing event

Reviewing a test case takes 5 minutes/test case

UAT test cases usually cover about 20-25% of total test cases

Setting Your Own Test Objectives and Test Standards

- Apply QA and QC expertise appropriately
- Don’t be afraid to change based on needs of different systems or different customers
- Modify or create new best practices that work for your organization.
- All good practices don’t fit every scenario, application, and/or customer