# Telerik QA Academy

# Sample Intermediate Exam #2

### Test

Test part URL: <https://testmoz.com/169646>

Test user: username from student system (<http://telerikacademy.com/>)

Test pass: qaacademy2013

### Equivalence partitioning and Boundary Value Analysis

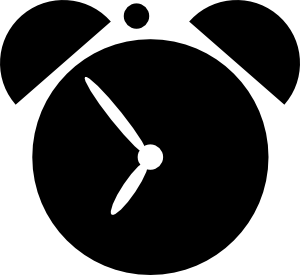
Go to <http://demos.kendoui.com/web/listview/editing.html>. Use Equivalence Partitioning and Boundary Value analysis to design test cases for Product Name, Unit Price and Units in Stock when adding a new record. Write the cases you’re going to cover and the expected result (success / error message / not accepted (no action) etc.) in a table like the one below.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Product Name** | | | **Unit Price** | | | **Unit in Stock** | | |
| **Logical Test Cases** | **Concrete Test Cases** | **Expected Result** | **Logical Test Cases** | **Concrete Test Cases** | **Expected Result** | **Logical Test Cases** | **Concrete Test Cases** | **Expected Result** |
| **No name** | **Empty input** | No action | No Input | **Empty input** | No action | No Input | **Empty input** | No action |
| **Numeric** | **123** | Success | -same | - | - | -same | - | - |
| **NumericNegative** | **-100** | Success | -same | - | No action | -same | - | No action |
| **NumericZero** | **0** | Success | -same | - | No action | -same | - | Success |
| **NumericTooLarge** | **111x1000** | Success | -same | - | Success | -same | - | Success |
| **Wildcards** | **\*?/** | Success | -same | - | No action | -same | - | No action |
| **NumericWildcard1** | **123??** | Success | -same | - | No action | -same | - | No action |
| **NumericWildcard2** | **123\*** | Success | -same | - | No action | -same | - | No action |
| **AlphaWildcardNumeric** | **Abc]123** | Success | -same | - | No action | -same | - | No action |
| **AlphaWildcard1** | **aBc??** | Success | -same | - | No action | -same | - | No action |
| **AlphaWildcard1** | **aBc\*** | Success | -same | - | No action | -same | - | No action |
| **Alphabetic** | **A** | Success | -same | - | No action | -same | - | No action |
| **AplhaAccentChars** | **á, é, í, ó, ú, ü, ñ, ¿, ¡** | Success | -same | - | No action | -same | - | No action |
| **CorrectInput** | **Beer** | Success | -same | 1000 | Success | -same | 5 | Success |
| **SQLInjection** | **1=1** | Success | -same | - | No action | -same | - | No action |
| **HTMLTag** | **<br/>** | Success | -same | - | No action | -same | - | No action |
| **Cyrilic** | **явноне** | Success | -same | - | No action | -same | - | No action |
| **LDAPsearch query** | **String ldapSearchQuery = "(cn=" + $username + ")";** | Success | -same | - | No action | -same | - | No action |
| **JStest** | **javascript:**  **alert(document.cookie);** | Success | -same | - | No action | -same | - | No action |
| **DateTime** | **6/5/2001 12:34** | Success | -same | - | No action | -same | - | No action |
| **Floating Point** | **0.0001** | Success | -same | - | Success | -same | - | Success |
| **EmptySpace/Interval** | **‘ ‘** | Success | -same | - | No action | -same | - | No action |
| **Asian** | あいうえお | Success | -same | - | No action | -same | - | No action |
| **ReservedChars** | **+@:=** | Success | -same | - | No action | -same | - | No action |
| **ExcludedChars** | **#:** **%** | Success | -same | - | No action | -same | - | No action |
| **XML** | [#x20-#xD7FF] | Success | -same | - | No action | -same | - | No action |
|  |  |  | **Floating Point** | **0.00000000000001** | Success | **Floating Point** | **0.00000000000001** | Success |
|  |  |  | **Floating PointNegative1** | **-0.00001** | No action | **-same** | **-** | No action |
|  |  |  | **BVA1** | 1 | Success | **-same** | **-** | Success |
|  |  |  | **MixedFloatingPoint** | 11,22.23 | No action | **-same** | **-** | No action |
|  |  |  | **FloatingSpace** | 11 9.0 | No action | **FloatingSpace** | 11 9.0 | No action |
|  |  |  |  |  |  |  |  |  |

### State Transition Table

You have an alarm clock where alarms can be added, set and deleted. When we set an alarm it is automatically turned on and activates when the time of the alarm comes. While it’s active you can either snooze or stop it. You can deactivate the alarm by turning it off or deleting it.

Slider turning alarm on and off



7

00

Snooze

Stop

7

00

Set

Cancel

Alarms

07:00

Off: Work

08:00

On: Tuesdays

add

delete

[execute valid and invalid state transitions] – [system & customer PointOfView]

ADD

clock SET – auto ON - ACTIVE ontime 1.snooze/2.stop

DEACTIVATE Turn OFF

DELETE

Your task is to prepare a State transition table. (Use the table below as a template)

### *System POV*

(exists until something (Occurs limited time, (response of the system transition

external happens) something that happens) during the transition)

|  |  |  |  |
| --- | --- | --- | --- |
| **State** | **Event** | **Action** | **Next State** |
| **1.Add** | Added to alarms  time) | Create alarm | 2.Set |
| **2.Set** | Auto ON | Require date/time | 3.Active |
| **3.Active** | Alarm time | Ringing | 3.Active |
| **4.Deactivate** | Turn OFF | Turn OFF | 5.InActive |
| **4.Deactivate** | Delete | Remove alarm | - |
| **5.InActive** | Turn ON | Turn ON | 3.Active |

### *Customer POV*

(exists until something (Occurs limited time, (response during the transition

external happens) something that happens) transition)

|  |  |  |  |
| --- | --- | --- | --- |
| **State** | **Event** | **Action** | **Next State** |
| **1.Add** | Click/Tap ‘Add’ Button  time) | Add new alarm | 2.Set |
| **2.Set** | Require date/time  Auto ON | Input date/time  Click/Tap ‘Set’ Button | 3.Active |
| **2.Set** | Input date/time and/or  Click/Tap ‘Cancel’ Button | Delete | - |
| **3.Active** | Alarm time/ Ringing | Click/Tap ‘Snooze’ Button | 3.Active (sub-state alarm time + 5 min) |
| **3.Active** | Alarm time/ Ringing | Click/Tap ‘Stop’ Button | 3.Active |
| **4.Deactivate** | Turn OFF via slider | Turn OFF alarm | 5.InActive |
| **4.Deactivate** | Click/Tap ‘Delete’ Button | Remove alarm | - |
| **5.InActive** | Turn ON via slider | Turn ON alarm | 3.Active |

### Searching for Code Performance Bottlenecks using Dynamic Analysis

You are given a C# application about finding the longest line in a cuboid (**Lines.zip**).

1. Use a dynamic analysis tool (a profiler) to inspect the application and find the places in its source code which cause significant performance degradation (bottlenecks).
2. Try to make a quick fix in the source code in order to significantly improve the performance.

Provide a screenshot of the profiler’s result and indicate the place in the source code where the bottleneck resides (name of the file, method, line of code).

### Finding Coding Standards Violations Using StyleCop

Use the same source code given for the previous problem (**Lines.zip**). This time your task is to inspect the C# source code using the StyleCop static analyzer and find where in the source code there are violations of the following coding rules:

1. No empty rows at the end of a file are allowed.
2. There should be no two curly brackets on the same row.

Provide screenshots for the places in the code where these standards are violated. Screenshots should show: the coding standard violated the file and the place in the code where the violation occurs.

### DataFilterControl

Make functional web tests using Test Studio. The tests should navigate to the following URL: <http://demos.telerik.com/silverlight/>.

* Navigate to all controls, chose DataFilter and verify you are on the correct page.
* Add a filter to the grid and verify it is applied correctly.
  + Apply filter “Quantity is equal to 9”. Each row, shown in the table should have value 9 in column Quantity. Use coded step for that validation. Find parent element of type RadGridView. With that element you can reach rows and cells. In order to have proper Assertion extract the values from the other two filter fields and think how to use them. The assertions should look like that Assert.AreEqual(extectedValue, actualValue). If you need to print something to the Log you can use Log.Writeline() command. Do not forget to use the Add to Element Explorer option.
* Add a data source to the test above. Use the data below. Locate your elements very carefully.

|  |  |  |
| --- | --- | --- |
| **Field** | **Expression** | **Value** |
| **Quantity** | Is equal to | 9 |
| **Name** | Starts with | P |
| **UnitPrice** | Is less than | 50 |

### Sikuli

Open a browser, load “<http://www.google.bg/>”, search into images tab for ‘telerik academy’, choose an image and from the context menu for it select [copy link address]. After that load into the address bar that URL.

Optional: Try to port to HTMLTestRunner format the test and execute it.

## Terms and Conditions:

During the exam you are allowed to use any teaching materials, lectures, books, existing source code, and other paper or Internet resources.

Direct or indirect communication with anybody in class or outside is forbidden. This includes but does not limit to technical conversations with other students, using mobile phones, chat software (Skype, ICQ, etc.), email, forum posts, etc.