Lab 16-1

Lab – Clearing the Database and Creating a Database Query Step

In these labs, you'll continue building your Robot to extract existing data created by your SeachItem robot and residing in the Development Database.

You'll loop through the database, extracting the description, overview and price for each item and populate your WordPad document with that data. You'll save the document with a unique name that includes the system date, and you'll close WordPad to leave your remote desktop in a clean state.

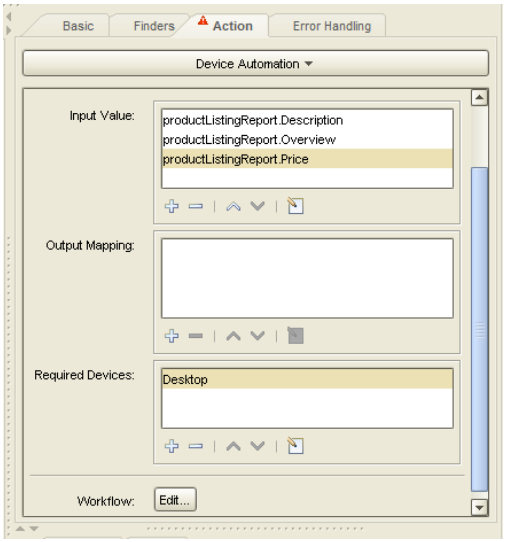
1. Make sure that:
    a. RoboServer and the Management Console are running
    b. The Development Database is running.
    c. On your remote system, that the Device Automation Service is running.
2. Begin by clearing your database. We want to limit the amount of data it contains in the interest of time…and to make looping through the database less tedious. Open your web browser and go to the Management Console: http://localhost:50080.
3. Click on the "Data Tab.
4. Expand "objectdb" and then select the HardyHardware table. The data will display. Click on the small trash can button at the far right of the first row. From the resulting dialog box, select "Delete all rows." Then click the [Delete] button.
5. Go to the "Schedules" tab in the Management Console. Double-click on the "HH Item Search" item.
6. In the resulting "Edit HH Item Search" dialog box, go to the right panel and double-click on "Robots/Search_Item."
7. In the resulting "Select robot" dialog box, click the [Next] button to bring up the input value.
8. Enter the word "Wrenches" as the value. Click on [Finish], then [Save].
9. Click on the "Run / Stop" button for "HH Item Search" to run your robot and generate new data.
10. Once it's complete, go to the "Data" tab to make sure the data is there. You should see 11 records.
11. Close the Management Console.
12. Go to Design Studio (open it if you've closed it) and your ProductReport robot.
13. Select the "Device Automation" action step, right mouse-click and select "Insert Step After."
14. With your new step selected, go to the "Action" tab and from the "Action" dropdown, select "Database" | "Query Database."

15. Make sure “objectdb” is selected as the Database. Then click [Edit] to edit the SQL Query.
16. In the SQL Editor, enter the SQL statement: “SELECT Description, Overview, Price FROM HardyHardware”. Click on the [Execute SQL] button to test. You should see the records for those three columns from the development database.
17. Click [OK] to close.
18. Then click the “+” symbol in the “Variables Map” panel to add and map three new variables.
    a. Description productListingReport.Descripton
    b. Overview productListingReport.Overview
    c. Price productListingReport.Price
19. Loop through the Query Database step and examine the results in the Variables panel. This is the data we will be using to enter on our WordPad document. The next step is to create a new Device Automation step to do that.

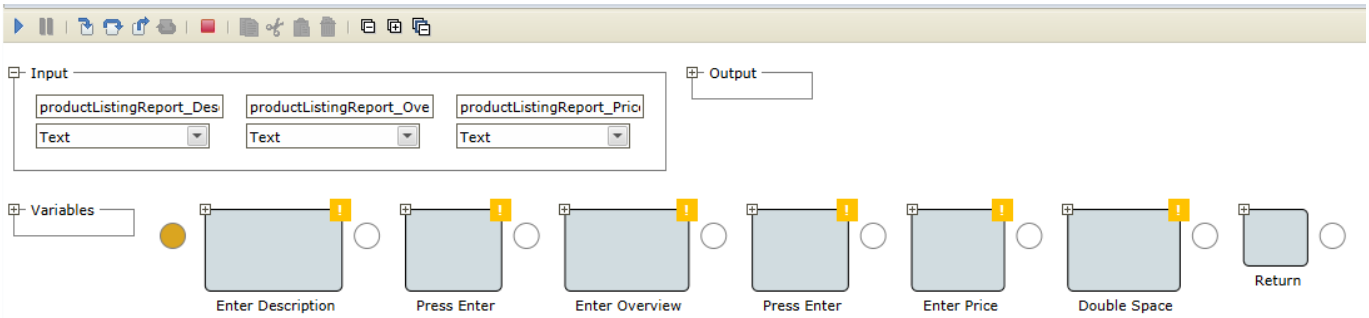
Lab 16-2

Lab – Device Automation – Writing Data to a Windows Application

20. Add a new Device Automation step between your Query Database and end step.
21. Add three input values from the following variables:
    a. productListingReport.Description
    b. productListingReport.Overview
    c. productListingReport.Price
22. Add “Desktop” as your Required Device. Your Action properties should look like this:



23. Click the [Edit] button on the Action tab to begin editing your workflow
24. Your document should already be open in the "Automation Device View" panel. Click on the "Document – WordPad" tab. This is the item you will want to interact with.
25. With the button just before the "Return" selected, click on the document displayed below in the "Automation Device View" to select it. NOTE: It should already have your title and date entered, and the cursor should show up left aligned below. This is where your text will be entered.
26. Right mouse-click on the "Document – WordPad" tab and select "Enter Text" | "From variable" | "productListing_Descripton" from the context menu and fly-outs.
27. Expand your new step's properties and change the name of the step from "Enter Text" to "Enter Description." This makes it easier for a human to understand.
28. [Step Over] your newly created step so the button to the left of the Return step is highlighted in gold. This executes the step you just created and puts you in the correct position for the next step.
29. In this step, you'll have your robot press the [Enter] key to create a new line for the next piece of data. Right mouse-click on the "Document – WordPad" tab and select "Press Key" | "Enter" from the context menu.
30. Follow this same process for the next two steps. You want to populate your WordPad document with the values from the variables "productListingReport_Overview" and "productListingReport_Price". Remember you'll want a new line ("Press Key" | "Enter") between them. And you'll insert a double-space after "productListingReport.Price." Please remember to [Step Into] or [Step Over] your steps as you create them, and you'll see the action take place on the document displayed below. Try to do this without specific step-by-step instructions:
    a. Enter Text from variable: productListingReport_Overview
    b. Press Enter key once
    c. Enter Text from variable: productListingReport_Price
    d. Press Enter key twice
31. When you are done, it should look like this:



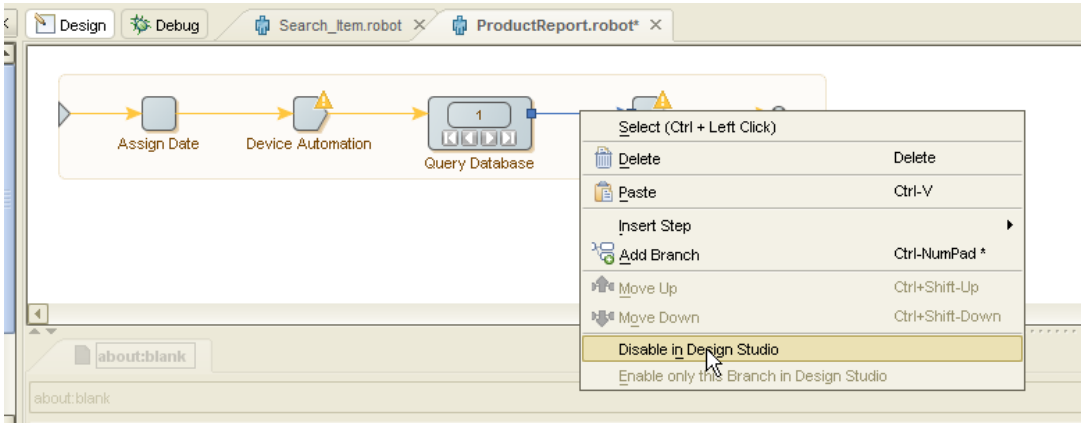
32. Click on reset (the red square icon on the toolbar) to reset your workflow. Click on [Save] to save your workflow. Click [OK] to close it.
33. Back in the main Design Studio window, click on the beginning step of your Robot
34. Click on the [Save All] button to save what you've done so far.
35. Wait at least 5 seconds and click on the "Refresh" button to refresh your Robot. If you get an error that tells you that no Device Automation. If you get a message that looks like this…

…wait 5 seconds and try refreshing again.

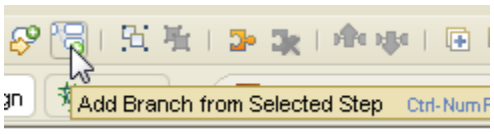
Lab 16-3

Lab – Device Automation – Save Document and Close the Application

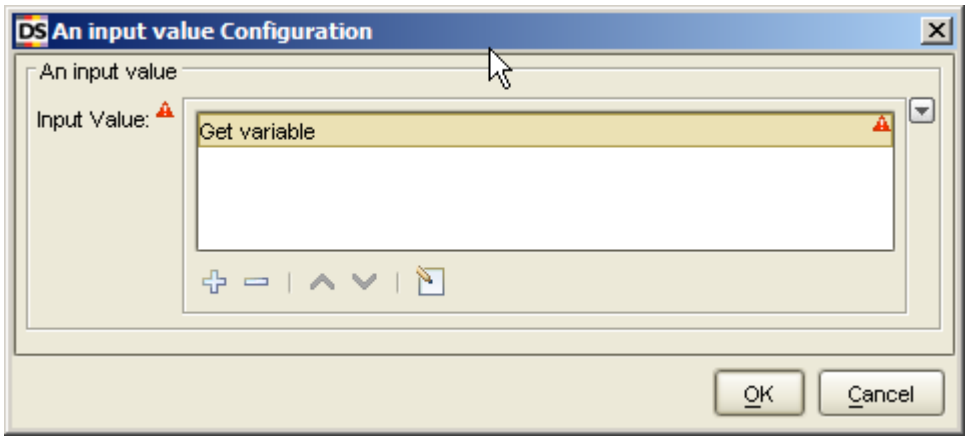
36. So you don't have to iterate through every item returned in your Query Database step., you can temporarily disable a connector in your robot. Do that by right mouse-clicking on the connector between your Database Query and your second Device Automation step. Select "Disable in Design Studio" from the context menu.



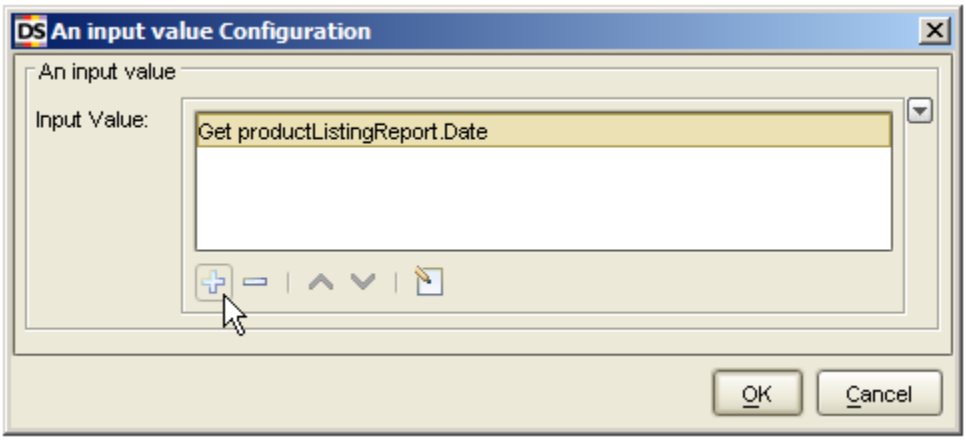
37. Click on the first Device Automation step to select it. Then from the Design Studio toolbar, click on "Add Branch from selected step"



38. Select the end step on the second branch and insert a new Action Step before it.
39. Select the "Device Automation" action from the dropdown on the step's "Action" tab.
40. On the Action tab, go to "Input Value" and using the "+" sign, add a new Converter. Because nothing is populating the converter yet, you'll be presented with a dialog box that instructs you to "Get variable." Click on the edit button.



41. In the next dialog box, select "productListingReport.Date from the dropdown menu and click on [OK] to add it.
42. Then click on the "+" button to add to the converter.

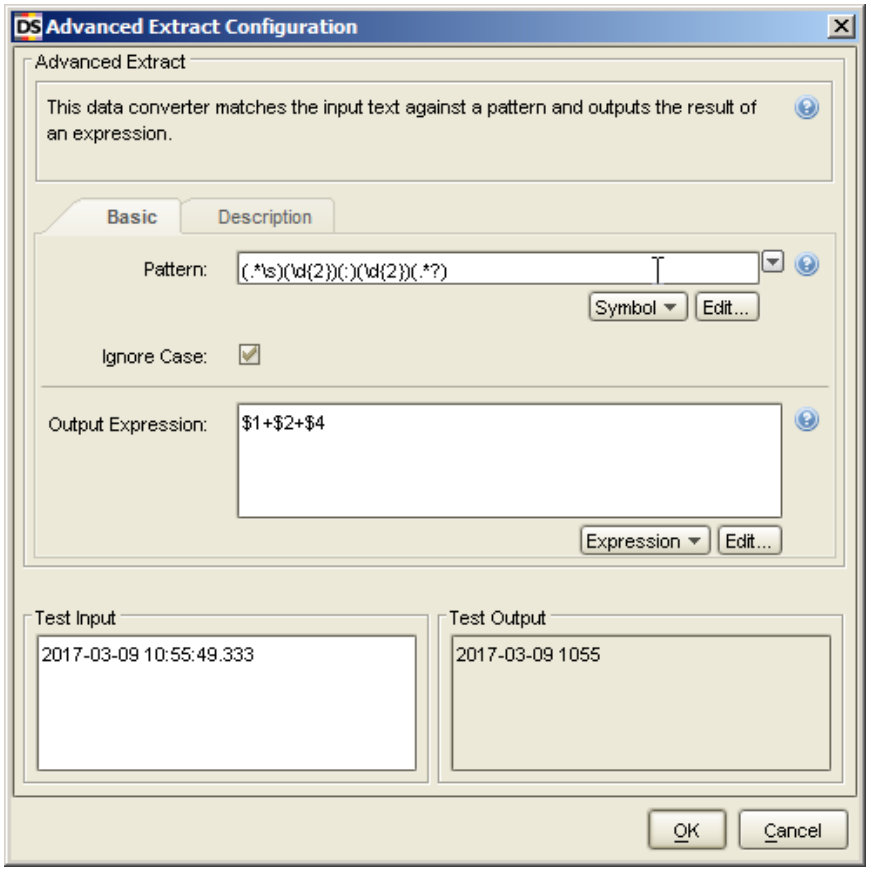


43. Select "Extraction | Advanced Extract" from the context menu and add the following pattern to the converter to match the date/time value of the variable:

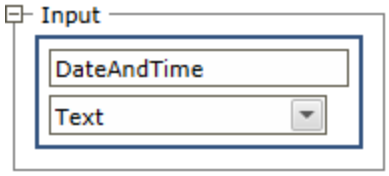
```
(.*\s)(\d{2})(:)(\d{2})(.*?)
```

…and output the following:

```
$1+$2+$4
```

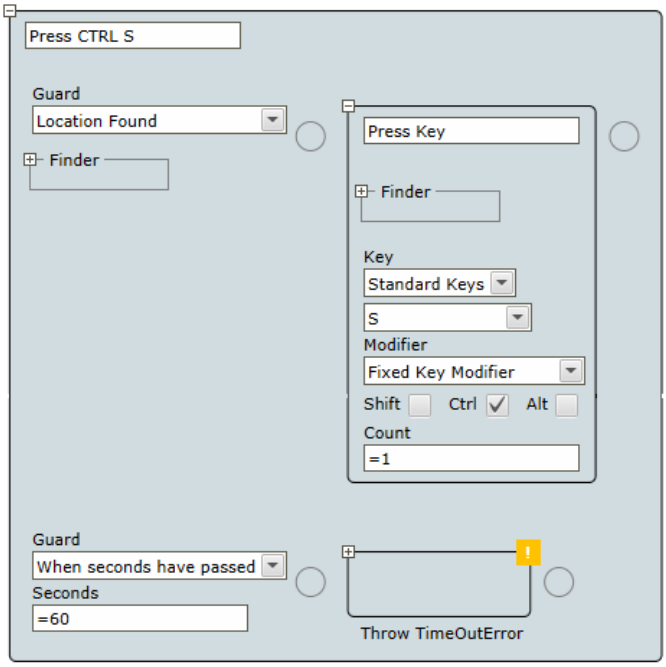


44. Click [OK] to close. Because you will use this value as part of your file name, no colons are allowed. This converter strips the colons from the value.
45. Go to the "Required Devices" section of your Device Automation step Action properties. Add your mapped device.
46. Click on the [Edit] button to edit the workflow of this Device Automation step.
47. What you will be doing here is saving the document with the system date and time as part of the file name and closing WordPad to leave it in it's beginning state. If you click on the "Document – Wordpad" tab, you should see your new document. Because you haven't run the the step that populates it with all the values from the database (remember, you disabled the connector from the Database Query loop step that does that), you only see a document with the title and the date. That's OK.
48. Expand "Input" and change the input name from "Text" to "DateAndTime" and accept the type, "Text" already selected from the dropdown.



49. The next thing you want to do is tell WordPad you want to save the document. You could either click the [Save] button or you could press CTRL S which does the same thing. Let's use CTRL S. Right mouse-click on the "Document – WordPad" tab and select "Press Key" | "Select All."

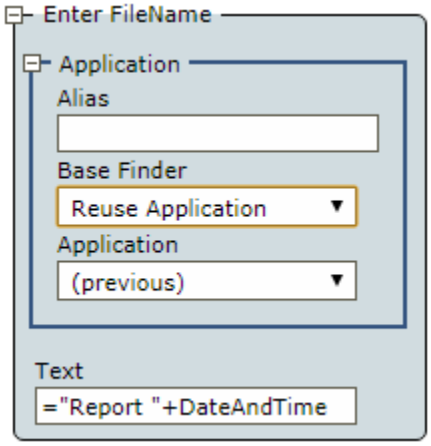
50. Expand the step and set it like this:



51. Notice you now have a new tab displayed below labeled "Save As." Select it. This is where you'll perform the next several steps. Click on that tab to select it.

52. Select the "File name" text box at the bottom of the Save As dialog by left mouse-clicking on it. Then right mouse-click on the "Save As" tab at the top of the Device Automation View and select "Enter Text" | "From Variable" | "DateAndTime: Text".

53. Expand your new step and change the name of the step to "Enter File Name. Change the Base Finder to "Reuse Application and the Text to: **"=Product Report " + DateAndTime**."



54. [Step Over] your “Enter File Name” step. Next you want to either click on the [Save] button with a Click step…or, alternatively, you could use a Press Key step and press ALT S…your choice. Do this one on your own.
55. Because saving a document is not instantaneous, you’ll want to put a Guarded Choice step after your Save Click step. Create a Guarded Choice step that waits 3 seconds before moving on to the next step.
56. Finally, you need to close WordPad because if you ran the same robot again, WordPad would have been left open. ALT F4 will close most Windows applications. Set up a Press Key step that does that.
57. Once you single step through that step, WordPad should have closed.
58. Save your Device Automation step and click OK to close the Editor.
59. Save your Robot.
60. Go to your remote desktop and delete the document that should have been saved in the Documents folder.
61. After resetting everything, try running your robot in Debug mode and see if your document gets created.