**Practice 1 - Automation of Spreadsheet Calculation**

**Handle Exceptions in your client's Cash Flow**

Your task is to automate the calculation of the difference between two fields in an Excel file (Cash In and Cash Out) and input it in the third column. Unfortunately, the file has accumulated a lot of errors over time. A simple workflow will throw **System.Exception** because the robot will try to perform math calculations with Int32 variables that contain letters.

Create a workflow that takes as input the excel file attached below and adds the difference between Cash In value and Cash Out value for each row on the Difference column. If the calculation of the difference between the two is successful, set the Status to Success, otherwise set it to either Cash In wrong or Cash Out wrong.

Use Try Catch blocks to catch exceptions when trying to convert Cash In and Cash Out values.

**[Practice1.xlsx](https://html.cdn.contentraven.com/crcloud/crscorm/uploads/uipath_lms_11218/encryptedfile/249620/v2.0/scormcontent/assets/x0gW-lDoBU6idvzV_WGkJtusvTj0TO1Bp-Practice1.xlsx" \t "_blank)**

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**Practice 1 solution**

1. Start the project as a **sequence**, give it a proper name and add annotations.
2. Use an '**Excel Application Scope'** container. Create a string variable ("WorkbookPath") and give it the default value "**Practice1.xls"**. In the container, add a '**Read Range'**activity and:
   1. Create a new **string** variable called **SheetName,**give it the Default value **Cashflow.**Make sure that the **AddHeaders** check box is selected.
   2. Create a new **DataTable** variable to store the content of the Excel file.
3. Use a '**For Each Row'** activity to loop through the DataTable and:
   1. Create 3 Int32 variables called **CashIn**,**CashOut**and **Result**.
   2. Add a '**Try Catch'** activity and place an 'Assign' activity in the 'Try' block to convert the cashIn value to Int32, by using the **cint(row("Cash In"))**method. In the 'Catch' block, include a **Log Message** with a Warn level ("**exception.Message + " at " + exception.Source**") and an **Assign**activity for the status variable (with the value **"Cash In wrong**").
   3. Add another '**Try Catch'** activity and place an 'Assign' activity in the 'Try' block to convert the cashOut value to Int32, by using the **cint(row("Cash Out"))**method. In the 'Catch' block, include a **Log Message** with a Warn level ("**exception.Message + " at " + exception.Source**") and an **Assign**activity for the status variable (with the value **"Cash Out wrong**")
   4. Add an '**If statement'**activity with the condition "status is nothing":
      * Under 'Then', **assign the result value** and set the result equal to the difference between **cashIn - cashOut and write the difference in the "Difference" column of the DataTable using an 'Assign'.**Assign the value **"Success"**to the **row("Status") of the DataTable.**
      * Under "Else", assign the "N/A" value in the "Difference" column and assign the value of the "**status" variable**to the**row("Status").**
   5. Create an 'Excel Application Scope' and add the path of the **WorkbookPath**.
   6. Add 'Write Range' activity and set the **SheetName** starting cell to A1, within the values table, having the **AddHeaders**selected.

**Practice 2 - Using the Global Exception Handler**

Starting from the project developed for Practice 1:

1. Change workbook path to read the Practice2.xlsx file.
2. Add a Global Exception Handler which addresses exceptions uncaught by the Try Catch activities.
3. Configure the exception handler to display the exception message in a message box and abort the process.
4. Run the process and fix all issues identified in the Excel file one by one.

**[Practice2.xlsx](https://html.cdn.contentraven.com/crcloud/crscorm/uploads/uipath_lms_11218/encryptedfile/249620/v2.0/scormcontent/assets/c_QrmNRmj3i2AJNR_yaX5Zgkv-gjjGcsX-Practice2.xlsx" \t "_blank)**

[9.7 KB](https://html.cdn.contentraven.com/crcloud/crscorm/uploads/uipath_lms_11218/encryptedfile/249620/v2.0/scormcontent/assets/c_QrmNRmj3i2AJNR_yaX5Zgkv-gjjGcsX-Practice2.xlsx" \t "_blank)

**Practice 2 solution**

1. Create a new workflow of **Global Handler**type in the project.
2. Add a '**Log message'** and set its level to **Error** and the message to **errorInfo.Exception.ToString.**
3. Add a 'Message Box' to display **"The following error has been identified: " + errorInfo.Exception.ToString.**
4. Under Choose Next Behavior assign the **ErrorAction.Abort**to argument "**result"**.