
Automating Tasks Using A2019 Excel Commands

Supply Chain Management – Production Efficiency Bot: Step List

Introduction

This demo will help you create a task bot that calculates the production line efficiency, filters the values less than 55, and sends out a report to the management.

Prerequisite

You need access to the Automation Anywhere Community Edition:

<https://community.cloud.automationanywhere.digital>

Note: After editing actions, make sure you click the **Apply** button to apply the changes and **Save** button to save the task bot.

1. Calculate the Total Minute Produced and Line Efficiency

- a. Open the Excel sheet from the desired location on the device.
 - i. From the Actions panel, drag and drop the **Excel advanced: Open** action to the bot editor.
 - ii. In the Action details panel, click **Desktop file** and enter the file path with name.
***Note:** At all such instances, you will have the option to either enter the file path manually or browse and select the required file. You can choose either of the two.*
 - iii. Open the file in a read-write mode and select the **Sheet contains a header** checkbox.
 - iv. Click **Apply**.
- b. Get the number of rows in the Excel sheet and store it into a variable.
 - i. From the Actions panel, drag and drop the **Excel advanced: Get number of rows** action below the open action.
 - ii. Select **Index** under the Select worksheet by field.
 - iii. Select the **Non-empty rows** radio button.
 - iv. In the **Assign to variable** field, create a variable and assign it to the output.
***Note:** Make sure that the variable is created with the variable type as **Number**.*
 - v. Click **Apply**.
- c. Insert a column in the Excel sheet and set the column name.
 - i. From the Actions panel, drag and drop the **Excel advanced: Insert/Delete rows/columns** action.
 - ii. Select the **Column operations** radio button and specify the location where you want to insert the column in the field.
 - iii. Click **Apply**.
 - iv. From the Actions panel, drag and drop **Excel advanced: Set cell** action to the bot editor.
 - v. In the Action details panel, select the **Specific cell** and specify the location where you want to place the column title.
 - vi. Enter the column name to set in the **Cell value** field.
 - vii. Click **Apply**.
 - viii. Similarly, insert a column in the Excel sheet and set the column name for Line Efficiency.
- d. Loop through each row in the Excel sheet.
 - i. From the Actions panel, drag and drop the **Loop** action to the bot editor.
 - ii. In the Iterator list, select **For each row in worksheet**.
 - iii. In the **Loop through** field, select the **Specific rows** option from the drop-down list.
 - iv. Enter the values for the *from* and *to* rows in the **From row** and **To row** fields respectively.
 - v. In the **Assign the current value to this variable** field, create and assign the variable to the output.
***Note:** Make sure that the variable is created with the variable type as **Record**.*
 - vi. Click **Apply**.

- e. Create a count variable and convert it to string.
 - i. From the Variable panel, create a variable **Count** with the Default value as 2.
***Note:** Make sure that the variable is created with the variable type as **Number**.*
 - ii. From the Actions panel, drag and drop the **Number: To string** action to the bot editor.
 - iii. In the **Enter a number** field, assign the count variable to it.
 - iv. In the **Enter number of digits after decimal (number format)** field, enter the number of digits after decimal.
 - v. In the **Assign the output to variable** field, create and assign the variable to the output.
***Note:** Make sure that the variable is created with the variable type as **String**.*
 - vi. Click **Apply**.

- f. Set Value to Standard Allowed Minute (SAM).
 - i. From the Actions panel, drag and drop the **Excel advanced: Set cell formula** action to the bot editor.
 - ii. In the Action details panel, select the **Specific cell** and specify the column heading (letter of the alphabet) along with the string count variable.
 - iii. Enter the value to set in the **Enter formula for specific cell** field.
 - iv. Click **Apply**.

- g. Calculate the Total Minute Produced and Line Efficiency.
 - i. From the Actions panel, drag and drop the **Excel advanced: Set cell formula** action to the bot editor.
 - ii. In the Action details panel, select the **Specific cell** and specify the column alphabet along with the string count variable.
 - iii. Enter the total minute produced formula to set in the **Enter formula for specific cell** field.
 - iv. Click **Apply**.
 - v. Similarly, calculate the Line Efficiency.

- h. Retrieve the Line Efficiency value and store it in a variable.
 - i. From the Actions panel, drag and drop the **Excel advanced: Get single cell** action to the bot editor.
 - ii. In the Action details panel, select the **Specific cell** and specify the column heading (letter of the alphabet) along with the string count variable from where you want to pick the value.
 - iii. In the **Store cell contents to** field, create and assign the variable to the output.
***Note:** Make sure that the variable is created with the variable type as **String**.*
 - iv. Click **Apply**.

- i. Convert the stored Line Efficiency string variable to number.
 - i. From the Actions panel, drag and drop the **String: To number** action to the bot editor.
 - ii. In the **Enter the string** field, provide the Line Efficiency string variable.
 - iii. In the **Assign the output to variable** field, create and assign the variable to the output.
***Note:** Make sure that the variable is created with the variable type as **Number**.*
 - iv. Click **Apply**.

- j. Using the If else command, if line efficiency is greater than 55, delete the current row.
 - i. From the Actions panel, drag and drop the **If** action to the bot editor.

- ii. Select the **Number variable** condition from the Condition field.
 - iii. In the **Number variable** field, select the number variable from the drop-down list.
 - iv. Select the **Greater Than (>)** condition from the drop-down list.
 - v. Enter the value as **55** in the Value field.
 - vi. Click **Apply**.
 - vii. If true, from the Actions panel, drag and drop the **Excel advanced: Insert/Delete rows/columns** action.
 - viii. Select the **Row operations** radio button.
 - ix. Select the **Delete Row(s) at** radio button and specify the location where you want to delete the row in the field.
 - x. Click **Apply**.
- k. Else, do not delete any row and increment the counter to move to the next row of the Excel sheet.
 - i. From the Actions panel, drag and drop the **If: Else** action parallel to If condition.
 - ii. From the Actions panel, drag and drop the **Number: Increment** action within the If: Else loop.
 - iii. In the **Enter number** field, assign the count variable to it.
 - iv. In the **Enter increment value** field, increment the value by 1.
 - v. In the **Assign the output to variable** field, assign the output to the same count variable.
 - vi. Click **Apply**.
 - vii. From the Actions panel, drag and drop the **Number: To string** action to the bot editor.
 - viii. In the **Enter a number** field, assign the count variable to it.
 - ix. In the **Enter number of digits after decimal (number format)** field, enter the number of digits after decimal.
 - x. In the **Assign the output to variable** field, create and assign the variable to the output. **Note: Make sure that the variable is created with the variable type as String.**
 - xi. Click **Apply**.
- l. Move the cursor one cell below.
 - i. To move the cursor, from the Actions pane, drag and drop the **Excel advanced: Go to cell** action at the end of loop.
 - ii. In the Action details panel, select the **Active cell** radio button and select **One cell below** option from the drop-down list.
 - iii. Click **Apply**.
- m. Hide the columns.
 - i. From the Actions panel, drag and drop the **Excel advanced: Hide rows/columns in selection** action at the end of the loop.
 - ii. Select the **Hide columns** radio button and enter the range of columns to be hidden.
 - iii. Click **Apply**.
- n. Convert Excel to pdf and store it in a desired location.
 - i. From the Actions panel, drag and drop the **Excel advanced: Convert Excel to PDF** to the bot editor.
 - ii. In the Action details panel, specify whether you want to convert the **Entire Excel file**, **Active sheet**, or **Specific sheet** to a PDF file.

- iii. Enter a name for the PDF file in the **Select PDF file name** field.
 - iv. Specify the location where you want to save the file in the **Select PDF storage location** field.
 - v. Click **Apply**.
- o. Send an email to the Management.
- i. From the Actions panel, drag and drop the **Email: Send** to the bot editor.
 - ii. In the **To address** field of the Action details panel, enter the management's email ID.
 - iii. In the **Subject** field, update the text.
 - iv. In the Attachment (optional) section, click **Desktop file**, and enter the file path and name of the PDF file.
 - v. In the Message field, enter the suitable message to be included in the body of the email.
 - vi. In the Send email via list, select the application for sending the email.
 - vii. Click **Apply**.
- p. Close the Excel file.
- i. From the Actions panel, drag and drop the **Excel advanced: Close** action to the fourth step.
 - ii. Check the **Save changes when closing file** checkbox.
 - iii. Click **Apply**.

Congratulations! You have now successfully created the bot that:

- Calculates the line efficiency.
- Generates a report containing items with a line efficiency value below 55.
- Sends the report to the management.