

## Module 6: Introduction to automation

### Scenario

You are a functional consultant for your organization Contoso. You are assigned to work on a model-driven Knowledge Admin app for your client Fabrikam and need to add scoring functionality without code. In this lab, you will create a calculated column, a rollup column, and a business rule.

### Exercise 1 – Prepare the Solution

#### Task 1 – Add Field to Knowledge Question

1. Navigate to <https://make.powerapps.com>.
2. Select the **Practice** environment you created.
3. Select **Solutions**.
4. Click to open the **Assessment**.
5. Click to open the **Knowledge Question** table.
6. Select the **Columns** tab and click **+ Add Column**.
7. Enter **Question Points** for **Display Name** and select **Whole Number** for **Data Type**.
8. Click **+ Add** next to **Calculation or Rollup** and select **+ Calculation**.
9. Click **Save**.
10. If you receive the **Set Question Points** popup >> click **+ Add Action**, else on the **Currently editing the calculated column** popup message >> click **Done**. Then click the newly added column **Question Points** from the column list and in the property pane click the **Open Calculation** >> click **+ Add Action**.
11. Type **answer1points** and select the suggested column from the drop-down list.
12. Type **+**, type **answer2points** and select the suggested column from the drop-down list.
13. Repeat it for **answer3points** and **answer4points**. Your action will look like the snippet below but with your unique organizational prefix.  
  
cre7f\_answer1points + cre7f\_answer2points + cre7f\_answer3points + cre7f\_answer4points
14. Save the action by clicking on the checkmark button.
15. Click **Save and Close**.
16. Click **Done**.

#### Task 2 – Add column to Knowledge Question Form

1. Make sure you still have the **Knowledge Question** table selected.

2. Select the **Forms** tab and click to open the **Main** form.
3. Drag the **Question Points** column from the **Table Column** and drop it below the **Knowledge Assessment** column on the form.
4. Click **Save**.
5. Click **Publish**.

### Task 3 – Add Column to Knowledge Assessment

1. Select **Solutions** >> click on the **Assessment** >> Click to open the **Knowledge Assessment** table.
2. Select the **Columns tab** and click **+ Add column**
3. Enter **Total Points** for **Display Name** and select **Whole Number** for **Data Type**.
4. Click **+ Add** next to **Calculation or Rollup** and select **+ Rollup**.
5. Click **Save**.
6. On the **Currently editing the calculated coulmn** popup message >> click **Done**. Then click the newly added column **Total Points** from the column list and in the property pane click the **Open Calculation** >> Click **+ Add Related Entity**.
7. Select **Knowledge Questions(Knowledge Assessment)** for **Related** and click the checkmark.
8. Click **+ Add Aggregation**.
9. Select **SUM** for **Aggregation Function**, select **(Knowledge Questions)Question Points** for **Aggregated Related Entity Field**, and click the checkmark.
10. Click **Save and Close**.
11. Click **Done**.

### Task 4 – Add Column to Knowledge Assessment Form

1. Click on the **Assessment** and then Select the **Knowledge Assessment** table.
2. Select the **Forms** tab and click on the Main form.
3. Drag the **Total Points** column from the **Table Column** list and drop it below the **Difficulty** column on the form.
4. Click **Save**.
5. Click **Publish**.

6. Click the back button.

## Exercise 2 – Create Business Rule

### Task 1 – Create Question Points Business Rule

1. Click on the **Assessment** and then click to open the **Knowledge Question** table.
2. Select the **Business Rules** tab and click **Add Business Rule**.
3. Click on the carrot button next to **Knowledge Question: New business rule**.
4. Enter **Question Points Rule** for **Business Rule Name** and click on the carrot again to hide details.
5. Select the **Condition** and enter **Check Question Points** for **Display Name**.
6. Go to the **Rules** section, select **Answer 1 Points** for **Field**, select **Is Less Than or Equals to** for **Operator**, select **Value** for **Type**, enter **0** for **Value**, and click **Apply**.
7. Above the rule you just created, there is a **+ New** button to add a new rule. Click **+ New** to add a new rule in addition to the first rule.
8. Go to the **Rule 2**, select **Answer 2 Points** for **Field**, select **Is Less Than or Equals to** for **Operator**, select **Value** for **Type**, enter **0** for **Value**, and click **Apply**.
9. Click **+ New** rule.
10. Go to the **Rule 3**, select **Answer 3 Points** for **Field**, select **Is Less Than or Equals to** for **Operator**, select **Value** for **Type**, enter **0** for **Value**. And click **Apply**.
11. Click **+ New** rule.
12. Go to the **Rule 4**, select **Answer 4 Points** for **Field**, select **Is Less Than or Equals to** for **Operator**, select **Value** for **Type**, enter **0** for **Value**, and click **Apply**.
13. Select the **Components** tab.
14. Drag **Show Error Message** action and place it in **True** side of the Condition.
15. Select the action, enter **Show Points Error Message** for **Display Name**, select **Question** for **Field**, enter **At least one answer must have points more than zero** in the Message, and click **Apply**.
16. Click **Save the rule**.
17. Click **Activate the rule**.
18. Confirm the activation by clicking the **Activate** button on the message pane.
19. Close the business rule designer by clicking the **X** button.
20. Click **Done**.

## Task 2 – Test Business Rule

1. Navigate to <https://make.powerapps.com> and ensure that you are in your **Practice** environment.
2. Select **Apps** and click on the **Knowledge Admin** model-driven application.
3. Navigate to **Knowledge Assessments** >> click **Play** >> Change area to **Assessment** from the bottom left of the page and click to open the **Test Assessment Four**.
4. Select the **Questions** tab.
5. Click **+ New Knowledge Question**.
6. The error message for the points requirement will be displayed on the Question column.
7. Type **Test Two Question** for **Question**.
8. Select **Simple** for **Question Type**.
9. Click **Save**. You will not be able to save because of the points requirement.
10. Scroll down to the **Answers** section, enter **Test Answer One** for **Answer 1**, enter **20** for **Answer 1 Points**. The points requirement error will go away.
11. Click **Save**. The row will now be saved.
12. Scroll down to the **Answers** section again, enter **Test Answer Two** for **Answer 2**, and **0** for **Answer 2 Points**.
13. Enter **Test Answer Three** for **Answer 3**, and **10** for **Answer 3 Points**.
14. Enter **Test Answer Four** for **Answer 4**, and **50** for **Answer 4 Points**.
15. Click **Save**. Scroll up and locate the **Question Point** column. The calculated points should show in this column.
16. Click **+ New**.
17. Select **Simple** for **Question Type**, and enter **Test Three Question** for **Question**.
18. Scroll down to the **Answers** section.
19. Enter **Test Three Answer One** for **Answer 1**, and **25** for **Answer 1 Points**.
20. Enter **Test Three Answer Two** for **Answer 2**, and **80** for **Answer 2 Points**.
21. Enter **Test Three Answer Three** for **Answer 3**, and **10** for **Answer 3 Points**.
22. Enter **Test Three Answer Four** for **Answer 4**, and **0** for **Answer 4 Points**.
23. Click **Save and Close**.
24. Select **Knowledge Assessments** and click to open **Test Assessment 4**.

25. Scroll down to locate the **Total Points** column and click on the calculator icon.
26. Click **Recalculate**.
27. The column should now show the total points of all the questions.
28. You can close your model-driven app.