UNSW Business School/

Information Systems and Technology Management

Solutions to SAS VA Workbook 2 Practices and Activities

Lab Workshop:

Compiled/Modified By	Date	SAS Visual Analytics
Jacky Mo	Feb. 2022	SAS Viya for Learners

All the lab workshops on SAS VA will help the students to learn and gain experience in data preparation; data exploration; creating reports; and constructing dashboard.

Reference:
This workshop material is extracted from SAS® Visual Analytics Fast Track (LWYVA185) with the permission from SAS Australia to use and publish for teaching purpose at the University of New South Wales.

File Name:
SAS Lab Manual – Solutions to SAS VA Workbook 2 Practices and Activities

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Solutions to Lesson 4

Solutions to Practices

1. **Creating a Simple Report**

   a. Open the browser and sign in to SAS Viya. SAS Drive is displayed by default.

   b. Open the **VA1- Practice4.1** report from the **Courses/YVA185/Basics/Practices (HR)** folder.

   1) In the upper left corner, click ☰ (**Show list of applications**) and select **Explore and Visualize**. SAS Visual Analytics appears.

   2) Click **All Reports**.

   3) Navigate to the **Courses/YVA185/Basics/Practices (HR)** folder.

   4) Double-click the **VA1- Practice4.1** report to open it.

   c. Create a geo coordinate map, to the left of the bar chart.

   1) In the left pane, click **Objects**.

   2) Drag the **Geo coordinate** object, from the Geographic group, to left side of the canvas.

   d. Modify options for the geo map.

   1) In the right pane, click **Options**.

   2) In the Object group, for the **Name** field, enter **Average Profit by Country**.

   3) For the **Title** field, enter **Average Profit by Country**.

   4) In the Legend group, for the **Visibility** field, select **Off**.

   e. Assign data items to the specified roles.

   1) In the right pane, click **Roles**.

   2) For the **Geography** role, select **Add ⇨ Employee Country**.

   3) For the **Color** role, select **Add ⇨ Average Profit**.

   4) For the **Data tip values** role, select **Add ⇨ Number of Employees** and click **OK**.

   The updated geo map should resemble the following:
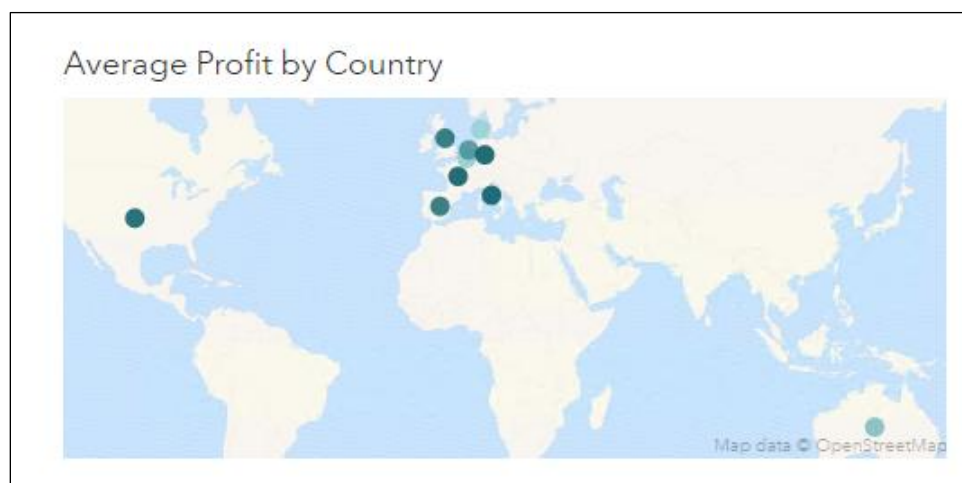
f. In the upper right corner of the geo map, click ↗ (**Maximize**) and then answer the questions.

Which country has the highest average profit? The lowest?

Answer: **Germany (DE) has the highest average profit. Denmark (DK) has the lowest average profit.**

- **In the detail table below the geo map, click the Average Profit column twice to sort in descending order.**

Employee Country	Average Profit ▼	Number of Employees
DE	$101,306.73	75
FR	$101,282.97	61
IT	$101,143.68	58

- **In the detail table below the geo map, click the Average Profit column again to sort in ascending order.**

Employee Country	Average Profit ▲	Number of Employees
DK	$30,493.46	37
BE	$32,199.92	44
AU	$42,026.84	77

Which country has the highest number of employees? The lowest?

**Answer:** **United States (US) has the highest number of employees. Denmark (DK) has the lowest number of employees.**

Employee Country	Average Profit	Number of Employees ▼
US	$96,861.47	123
AU	$42,026.84	77
DE	$101,306.73	75

- **In the detail table below the geo map, click the Number of Employees column twice to sort in descending order.**

Employee Country	Average Profit	Number of Employees ▲
DK	$30,493.46	37
BE	$32,199.92	44
NL	$67,704.25	51

- **In the detail table below the geo map, click the Number of Employees column to sort in ascending order.**

- **In the upper right corner of the geo map, click ⬑ (Restore).**

g. Create a dual axis bar-line chart at the bottom of the canvas.

   1) In the left pane, click **Objects**.

   2) Drag the **Dual axis bar-line chart** object, from the Graphs group, to the bottom of the canvas.

   3) In the right pane, click **Roles**.

   4) For the **Category** role, select **Add** ⇨ **Anniversary Month**.

   5) For the **Measure (bar)** role, select **Add** ⇨ **Number of Employees**.

   6) For the **Measure (line)** role, select **Add** ⇨ **Average Profit**.

h. Modify options for the dual axis bar-line chart.

   1) In the right pane, click **Options**.

   2) In the Object group, for the **Name** field, enter **Employees and Profit by Anniversary Month**.

   3) For the **Title** field, enter **Employees and Profit by Anniversary Month**.

   4) In the Line group, select **Markers**.

i. In the dual axis bar-line chart, on the horizontal axis, right-click **Anniversary Month** and select **Sort** ⇨ **Anniversary Month Ascending** to sort the bars.

The dual axis bar-line chart should resemble the following:
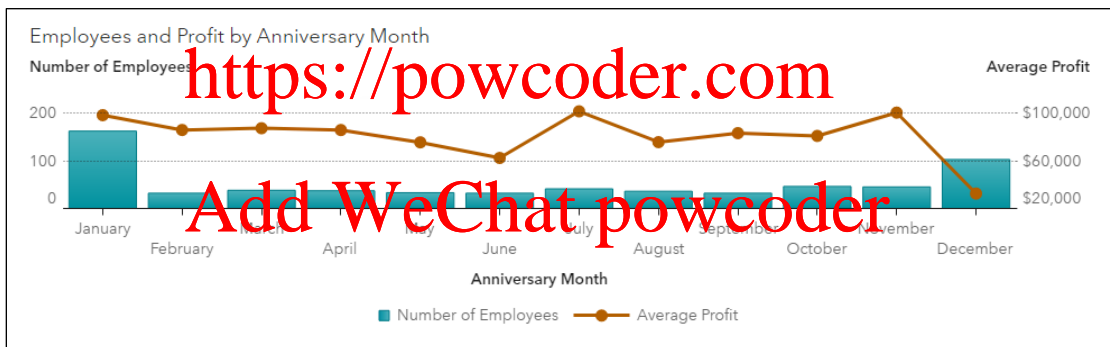
j. In the upper right corner of the dual axis bar-line chart, click ⬈ (**Maximize**).

   In which month were most employees hired?

   Answer: January

Anniversary Month	Number of Employees ▼	Average Profit
January	162	$98,050.30
December	103	$32,874.06
October	47	$80,794.74

   • **In the detail table below the dual axis bar-line chart, click the Number of Employees column twice to sort in descending order.**

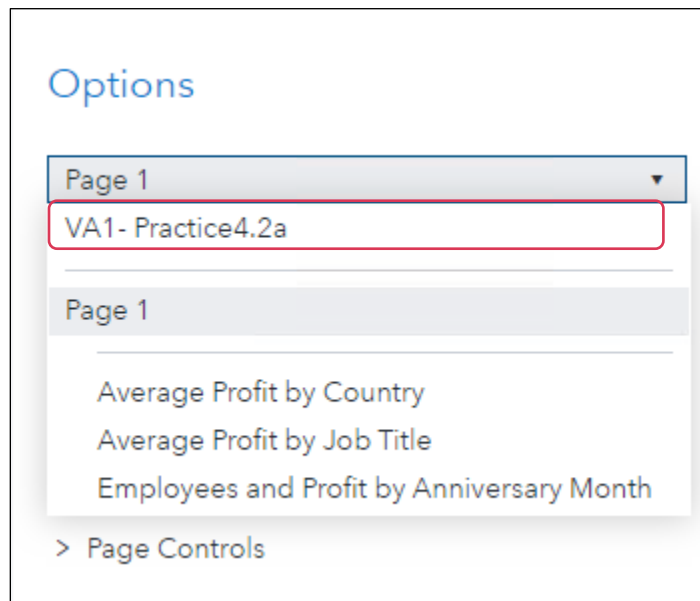Which anniversary month contains employees that generate the highest average profit?

Answer: July

Anniversary Month	Number of Employees	Average Profit ▼
July	42	$101,237.03
November	46	$100,176.59
January	162	$98,050.30

- **In the detail table below the dual axis bar-line chart, click the Average Profit column twice to sort in descending order.**
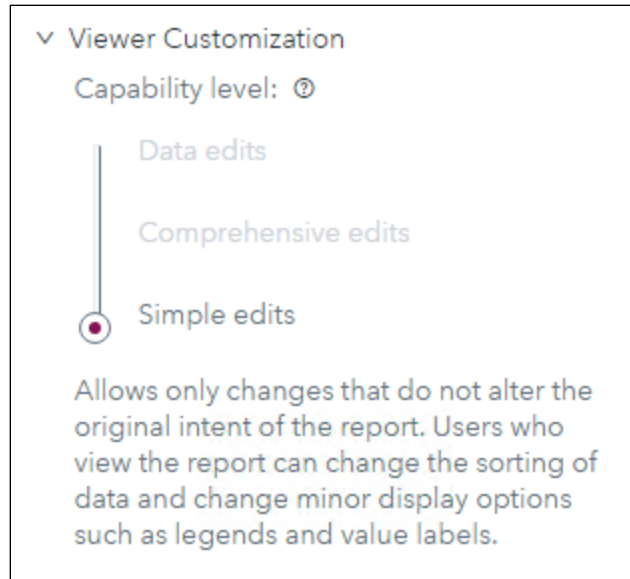- **In the upper right corner of the dual axis bar-line chart, click** ⌐ **(Restore).**

k. Save the report.

2. **Working with Pages**

   a. Open the browser and sign in to SAS Viya. SAS Drive is displayed by default.

   b. Open the **VA1- Practice4.2a** report from the **Courses/YVA185/Basics/Practices (HR)** folder.

   1) In the upper left corner, click ≡ (**Show list of applications**) and select **Explore and Visualize**. SAS Visual Analytics appears.

   2) Click **All Reports**.

   3) Navigate to the **Courses/YVA185/Basics/Practices (HR)** folder.

   4) Double-click the **VA1- Practice4.2a** report to open it.

   c. Set the Viewer Customization level so that users cannot change the data or the type of chart used in the report.

   1) In the right pane, click **Options**.

   2) Use the drop-down list, on the top of the Options pane, to select the report.

   Options

   Page 1 ▼

   VA1- Practice4.2a

   Page 1

   Average Profit by Country
   Average Profit by Job Title
   Employees and Profit by Anniversary Month

   > Page Controls

   3) In the Viewer Customization group, for **Capability level**, select **Simple edits**.

Viewer Customization
Capability level: ⑦

Data edits

Comprehensive edits

◉ Simple edits

Allows only changes that do not alter the original intent of the report. Users who view the report can change the sorting of data and change minor display options such as legends and value labels.

This option enables viewers to make changes that will not alter the original intent of the report. Users who view the report can sort data and change minor display options, but they cannot change the data or the type of chart used in the report.

d. Add a new page to the report and rename pages.

1) In the upper left corner of the report, next to **Page 1**, click ☐ (**New page**).

2) Double-click the **Page 2** heading to make it editable.

3) Enter **Profit Analysis** and press Enter.

4) Click **Page 1** to make it active.

5) Double-click the **Page 1** heading to make it editable.

6) Enter **Employee Analysis** and press Enter.

e. Create a bar chart on the Profit Analysis page.

1) If necessary, click the **Profit Analysis** tab to make the page active.

2) In the left pane, click **Objects**.

3) Drag the **Bar chart** object, from the Graphs group, to the canvas.

4) In the right pane, click **Roles**.

5) For the **Category** role, select **Add ⇨ Group**.

6) For the **Measure** role, select **Number of Employees ⇨ Total Profit**.

f. Specify **Total Profit by Group** as the name of the bar chart.

1) In the right pane, click **Options**.

2) In the Object group, for the **Name** field, enter **Total Profit by Group**.

3) For the **Title** field, enter **Total Profit by Group**.

g. In the bar chart, on the vertical axis, right-click **Group** and select **Sort ⇨ Group: Ascending** to sort the bars.

The bar chart should resemble the following:

Total Profit by Group
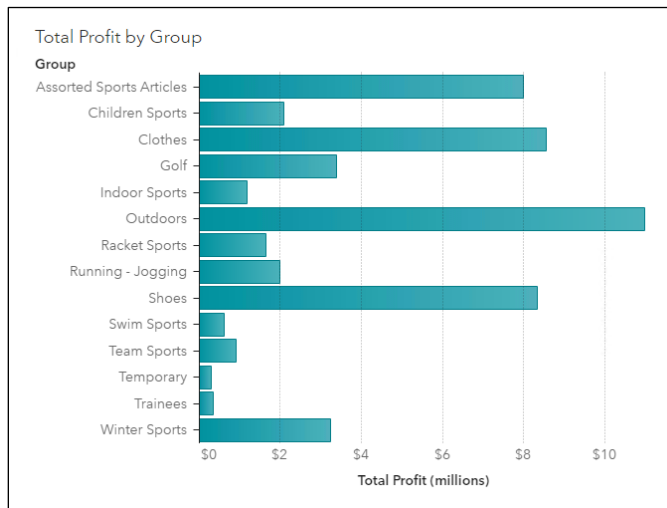
h. In the upper right corner of the bar chart, click ⬈ (**Maximize**) and then answer the questions.

Which group produces the highest total profit?

Answer: **Outdoors**

Group	Total Profit ▼
Outdoors	$10,966,493.96
Clothes	$8,560,841.97
Shoes	$8,328,452.00

- **In the detail table below the bar chart, click the Total Profit column twice to sort in descending order.**

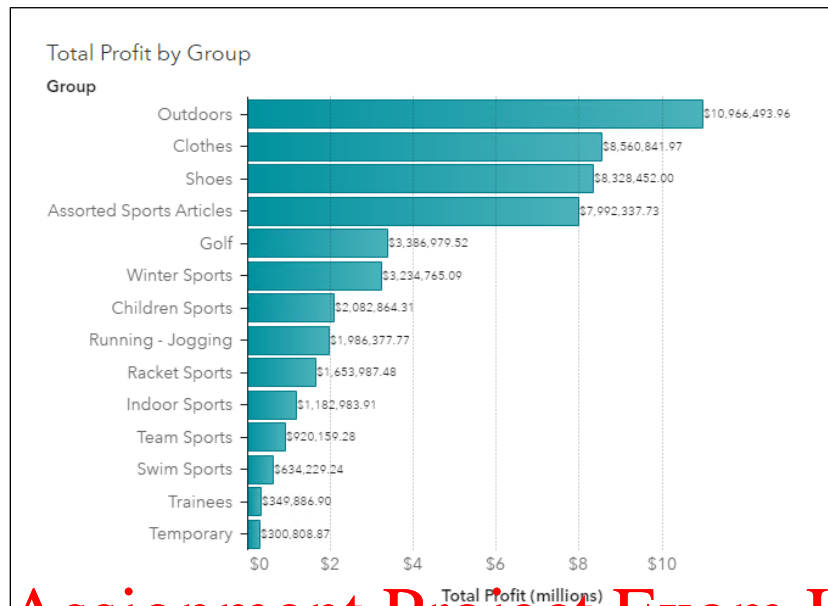Which group produces the lowest total profit?

Answer: **Temporary**

Group	Total Profit ▲
Temporary	$300,808.87
Trainees	$349,886.90
Swim Sports	$634,229.24

- **In the detail table below the bar chart, click the Total Profit column to sort in ascending order.**
- **In the upper right corner of the bar chart, click ⬊ (Restore).**

i. Save the report.

j. In the upper left corner, click ✎ (**View report**) to view the report.

k. On the Profit Analysis page, sort the bars by **Total Profit** in descending order and show data labels.

1) At the top of the report, click the **Profit Analysis** tab to make the page active, if necessary.

2) Right-click the bar chart and select **Sort** ⇨ **Total Profit: Descending**.

3) Right-click the bar chart and select **Labels** ⇨ **Data labels**.

The bar chart should resemble the following:

Total Profit by Group

Group	Total Profit
Outdoors	$10,966,493.96
Clothes	$8,560,841.97
Shoes	$8,328,452.00
Assorted Sports Articles	$7,992,337.73
Golf	$3,386,979.52
Winter Sports	$3,234,765.09
Children Sports	$2,082,864.31
Running - Jogging	$1,986,377.77
Racket Sports	$1,653,987.48
Indoor Sports	$1,182,983.91
Team Sports	$920,159.28
Swim Sports	$634,229.24
Trainees	$349,886.90
Temporary	$300,808.87

Total Profit (millions): $0 $2 $4 $6 $8 $10

The Viewer Customization level enables viewers to modify simple options, like modifying the sort direction and changing labels.

l. In the upper right corner, click ⋮ (**Menu**) and select **Close** to close the report.

3. **Working with Prompts and Actions**

a. Open the browser and sign in to SAS Viya. SAS Drive is displayed by default.

b. Open the **VA1- Practice4.2b** report from the **Courses/YVA185/Basics/Practices (HR)** folder.

1) In the upper left corner, click ☰ (**Show list of applications**) and select **Explore and Visualize**. SAS Visual Analytics appears.

2) Click **All Reports**.

3) Navigate to the **Courses/YVA185/Basics/Practices (HR)** folder.

4) Double-click the **VA1- Practice4.2b** report to open it.

c. Add a report prompt that uses a button bar to select the employee type.

1) In the upper right corner, click ⋮ (**Menu**) and select **Expand report controls**.

The report prompt area is shown at the top of the report.

Drop a data item or control to create a report prompt

Employee Analysis   ⋮   Profit Analysis   +

2) In the left pane, click **Objects**.

3) Drag the **Button bar** object, from the Controls group, to the **Drop a data item or control to create a report prompt** area.

4) In the right pane, click **Roles**.

5) For the **Category** role, select **Add** ⇨ **Employee Status**.

d. Modify options for the button bar.

1) In the right pane, click **Options**.

2) In the Object group, for the **Name** field, enter **Employee Status Selector**.

3) For the **Title** field, select **Custom title**.

4) For the **Title** field, enter **Select an employee status:**.

   The button bar should resemble the following:
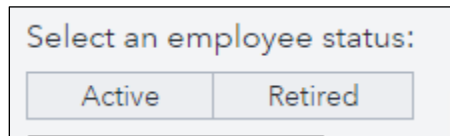
e. Add actions between objects on the Employee Analysis page.

1) If necessary, click the **Employee Analysis** page to make it active.

2) In the canvas, click the geo map to select it.

3) In the right pane, click **Actions**.

4) In the Object Links group, select **Average Profit by Job Title** (the bar chart).

5) Verify that ▽ ▾ (**Filter**) is selected.

6) Select **Employees and Profit by Anniversary Month** (the dual axis bar-line chart).

7) Verify that ▽ ▾ (**Filter**) is selected.
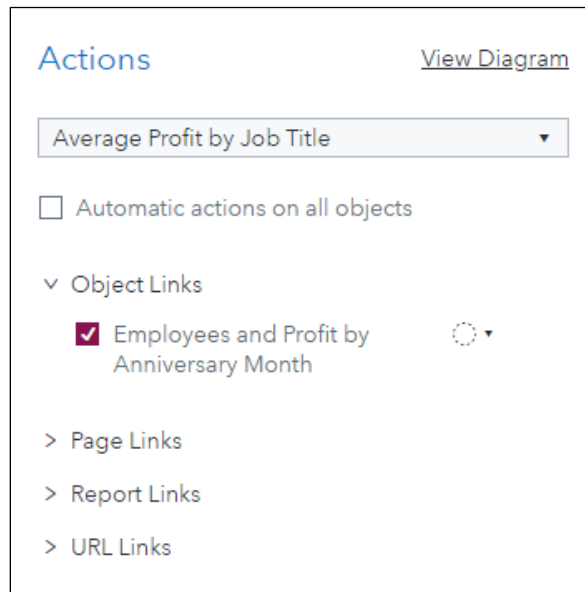
The Actions pane should resemble the following:
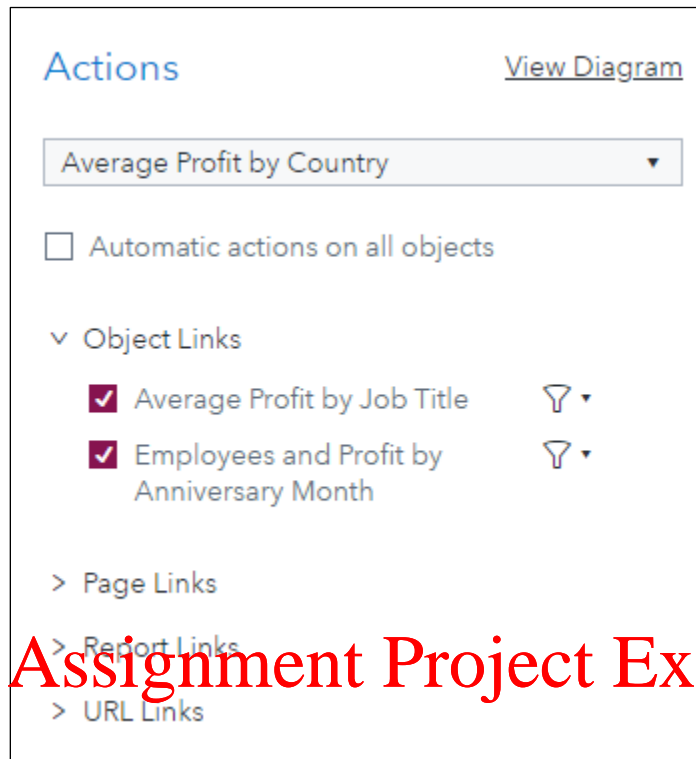
8) In the canvas, click the bar chart to select it.

9) In the right pane, click **Actions**, if necessary.

10) In the Object Links group, select **Employees and Profit by Anniversary Month** (the dual axis bar-line chart).

11) Click 🔽 (**Filter**) and select **Linked selection**.

The Actions pane should resemble the following:

f. On the Profit Analysis page, add a rank to the list table to show the top five employees by **Total Profit**.

1) Click the **Profit Analysis** page to make it active.

2) In the canvas, click the list table to select it.

3) In the right panel, click **Ranks**.

4) In the Ranks pane, select **New rank** ⇨ **All visible categories**.

5) Verify that **Top count** is specified.

6) For the **Count** field, enter **5**.

7) For the **By** field, verify that **Total Profit** is specified.

The Ranks pane should resemble the following:

The list table should resemble the following:

Top 5 Employees by Total Profit Generated

Name	Total Profit ▼
Agnes de Fourtou	$395,552.03
Christelle Bourrier	$390,366.78
Eric Golliot	$322,279.04
Cedric Desqueyroux	$312,768.37
Marie-Christine Le Bihen	$312,696.37

g. Save the report.

h. View the report and answer the questions.

    1) In the upper left corner, click 🖉 (**View report**) to view the report.

    2) Answer the questions.

Which job title has the highest average profit among active employees in Australia?

Answer: **Sales Rep. II**
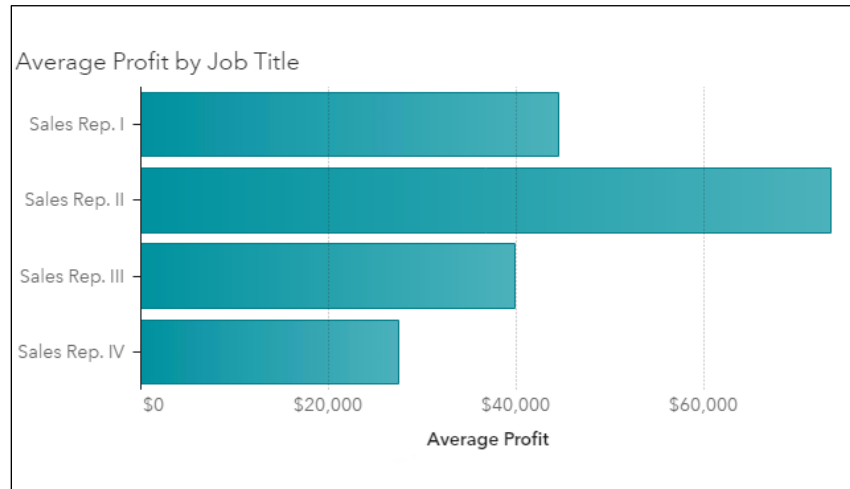
Average Profit by Job Title

Sales Rep. I

Sales Rep. II

Sales Rep. III

Sales Rep. IV

$0 $20,000 $40,000 $60,000

Average Profit

- **At the top of the report, click the Employee Analysis tab to make the page active.**
- **In the Employee Status Selector (report prompt), select Active.**
- **In the geo map, click the AU coordinate.**

For Orion USA, which active sales representative had the highest total profit generated for the Indoor Sports group?

Answer: **Tywanna Mcdade**

Top 5 Employees by Total Profit Generated

Name	Total Profit ▼
Tywanna Mcdade	$178,299.60
Daniel Pulliam	$172,949.97
Clement Davis	$17,429.24

- **At the top of the report, click the Profit Analysis tab to make the page active.**
- **In the Employee Status Selector (report prompt), select Active, if necessary.**
- **In the Company Selector (page prompt), select Orion USA.**
- **In the bar chart, click the Indoor Sports bar.**

For Orion France, how many active sales representatives sold items for the Racket Sports group?

Answer: **One employee (Marc Zampa)**

Top 5 Employees by Total Profit Generated

Name	Total Profit ▼	
Marc Zampa	$66,109.84	

- **At the top of the report, click the Profit Analysis tab to make the page active, if necessary.**
- **In the Employee Status Selector (report prompt), select Active, if necessary.**
- **In the Company Selector (page prompt), select Orion France.**
- **In the bar chart, click the Racket Sports bar.**

i. In the upper right corner, click ⋮ (**Menu**) and select **Close** to close the report.

4. **Working with Hidden Pages and Page Links**

a. Open the browser and sign in to SAS Viya. SAS Drive is displayed by default.

b. Open the **VA1- Practice4.2c** report from the **Courses/YVA185/Basics/Practices (HR)** folder.

1) In the upper left corner, click ≡ (**Show list of applications**) and select **Explore and Visualize**. SAS Visual Analytics appears.

2) Click **All Reports**.

3) Navigate to the **Courses/YVA185/Basics/Practices (HR)** folder.

4) Double-click the **VA1- Practice4.2c** report to open it.

c. Hide **Page 3** and rename the page as **Employee Details**.

1) At the top of the report, click the **Page 3** tab to make the page active.

2) Click ⋮ (**Options**) and select **Hide page**.

3) Double-click the **Page 3** heading to make it editable.

4) Enter **Employee Details** and press Enter.

d. Modify options for the hidden page, Employee Details.

1) In the right pane, click **Options**.

2) In the General group, for the **Window width (percentage)** field, enter **75**.

3) For the **Window height (percentage)** field, enter **75**.

The Options pane should resemble the following:

Options

Employee Details ▼

∨ General

Name: *

Employee Details

☑ Hide and link to page as pop-up window

Window width (percentage):

75

Window height (percentage):

75

☐ Periodically reload page data

e. Add a page prompt to the Employee Details page that uses a slider control to select a range of years of service.

1) On the Employee Details page, click ⬚ (**Options**) and select **Expand page controls.**

2) In the left pane, click **Objects**.

3) Drag **Slider**, from the Controls group, to the **Drop a data item or control to create a page prompt** area.

4) In the right pane, click **Roles**.

5) For the **Measure/Date** role, select **Add ⇨ Years of Service**.

f. Modify options for the slider control.

1) In the right pane, click **Options**.

2) In the Object group, for the **Name** field, enter **Years of Service Selector**.

3) For the **Title** field, select **Custom title**.

4) For the **Title** field, enter **Select a range of years:**.

5) In the Slider group, select **Act on aggregated data in filtered objects**.

6) In the **Minimum** field, enter **0**.

7) In the **Maximum** field, enter **45**.

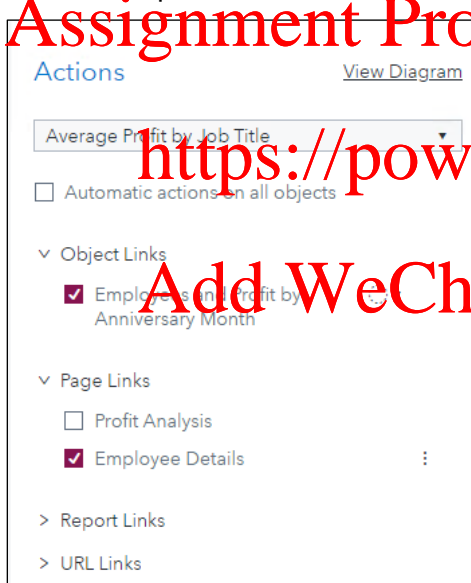8) For the slider control, use the circles to select the entire range of years.

The slider control should resemble the following:

Select a range of years:

0.00 to 45.00

0.00   45.00
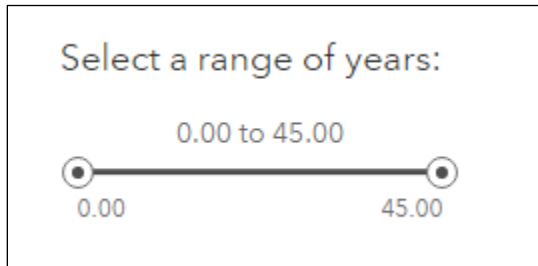
g. Add a page link from the bar chart on the Employee Analysis page to the Employee Details page.

1) At the top of the report, click the **Employee Analysis** tab to make the page active.

2) In the canvas, click the bar chart to select it.

3) In the right pane, click **Actions**.

4) On the Actions pane, expand **Page Links**, if necessary.

5) Click **Employee Details**.

The Actions pane should resemble the following:

Actions   View Diagram

Average Profit by Job Title   ▼

☐ Automatic actions on all objects

∨ Object Links

☑ Employees and profit by
  Anniversary Month

∨ Page Links

☐ Profit Analysis

☑ Employee Details   ⋮

> Report Links

> URL Links

h. Save the report.

i. View the report and answer the questions.

1) In the upper left corner, click [✎] (**View report**) to view the report.

2) Answer the following questions:

How many employees retired in Italy with the Sales Rep. III job title?

Answer: Two employees (Giulia Buonocunto and Giuseppe Franco Scoditti)

Employee Information			
Name ▲	Company	Job Title	Anr
Giulia Buonocunto	Orion Italy	Sales Rep. III	$
Giuseppe Franco Scoditti	Orion Italy	Sales Rep. III	$
		Sum:	$

- **At the top of the report, click the Employee Analysis tab to make the page active, if necessary.**
- **In the Employee Status Selector (report prompt), select Retired.**
- **In the geo map, click the IT coordinate.**
- **In the bar chart, double-click the Sales Rep. III bar.**
  The list table contains all of the employees that meet these criteria.
- **Click Close to close the Employee Details hidden window.**

Management has decided to start promotions with active employees in the United States with the Sales Rep. I job title. Of the active employees with 25 or more years of service, how many generate a total profit more than $200,000?

Answer: Five employees

Employee Information				
Name	Company	Job Title	Annual Salary	Total Profit ▼
Ray Abbott	Orion USA	Sales Rep. I	$25,680.00	$371,506.09
Eric Michonski	Orion USA	Sales Rep. I	$26,990.00	$280,590.08
Donald Court	Orion USA	Sales Rep. I	$27,100.00	$271,089.42
Tachaun Voron	Orion USA	Sales Rep. I	$25,125.00	$260,146.86
Glorina Myers	Orion USA	Sales Rep. I	$26,025.00	$220,995.63

- **At the top of the report, click the Employee Analysis tab to make the page active, if necessary.**
- **In the Employee Status Selector (report prompt), select Active.**
- **In the geo map, click the US coordinate.**
- **In the bar chart, double-click the Sales Rep. I bar.**
- **In the Years of Service Selector, click the circle on the left, enter 25 as the value, and press Enter.**
- **Click the circle on the right, enter 45 as the value, and press Enter.**
- **In the list table, click the Total Profit heading twice to sort in descending order.**
- **Click Close to close the Employee Details hidden window.**

j. In the upper right corner, click ⋮ (**Menu**) and select **Close** to close the report.

5. **Working with Report-Level and Graph-Level Display Rules**

   a. Open the browser and sign in to SAS Viya. SAS Drive is displayed by default.

   b. Open the **VA1- Practice4.3** report from the **Courses/YVA185/Basics/Practices (HR)** folder.

      1) In the upper left corner, click ▤ (**Show list of applications**) and select **Explore and Visualize**. SAS Visual Analytics appears.

      2) Click **All Reports**.

      3) Navigate to the **Courses/YVA185/Basics/Practices (HR)** folder.

      4) Double-click the **VA1- Practice4.3** report to open it.

   c. Add a report-level display rule for job title.

      1) In the right pane, click **Rules**.

      2) In the Display Rules pane, click **New rule**.

         a) In the New Display Rule window, enter **Sales Rep I** as the first value.

         b) On the left of the value, click ▧ (**Select a style**).

         c) Select **Deep blue**.

         d) Click ➕ (**Add**) and enter **Sales Rep II**.

         e) On the left of the value, click ▧ (**Select a style**).

         f) Select **Deep blue**.

         g) Click ➕ (**Add**) and enter **Sales Rep III**.

         h) On the left of the value, click ▧ (**Select a style**).

         i) Select **Deep blue**.

         j) Click ➕ (**Add**) and enter **Sales Rep IV**.

         k) On the left of the value, click ▧ (**Select a style**).

         l) Select **Deep blue**.

         m) Click ➕ (**Add**) and enter **Temp. Sales Rep.**

         n) On the left of the value, click ■ (**Select a style**).

o) Select **Deep orange**.

Standard colors:
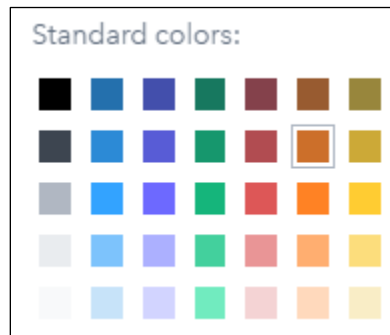
p) Click ➕ (**Add**) and enter **Trainee**.

q) On the left of the value, click ⬛ (**Select a style**).

r) Select **Deep orange**.

s) Click ➕ (**Add**) and enter **Purchasing Agent I**.

t) On the left of the value, click ⬛ (**Select a style**).

u) Select **Deep orange**.

v) Click ➕ (**Add**) and enter **Purchasing Agent III**.

w) On the left of the value, click ⬛ (**Select a style**).

x) Select **Deep orange**.

The Display Rules pane should resemble the following:

y) Click **OK**.

The bar chart should resemble the following:

Number of Employees by Job Title
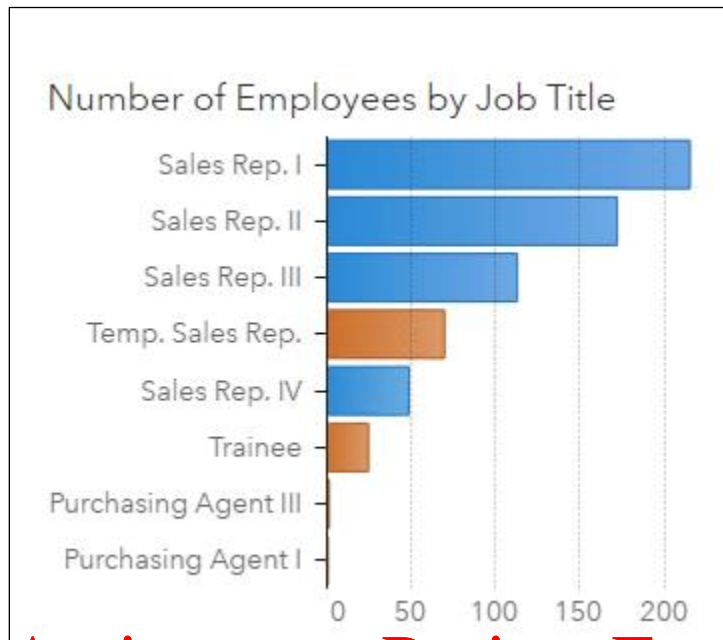
d. Add three expression display rules to the bar chart on the Profit Analysis page.

1) Click the **Profit Analysis** page to make it active.

2) In the canvas, click the bar chart to make it active.

3) In the right pane, click **Rules**.

4) In the Display Rules pane, select **New rule** ⇨ **Total Profit**.

    a) For the **Operator** field, select **<** (less than).

    b) For the **Value** field, enter **200,000**.

    c) For the **Style Area** field, select **Graph**.

    d) For the **Style** field, click ☑ (**Select a style**).

    e) Select **Red**.

Standard colors:
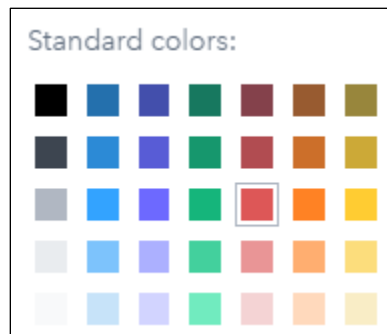
    f) Click **OK**.

5) In the Display Rules pane, select **New rule** ⇨ **Total Profit**.

    a) For the **Operator** field, select **≤x≤**.

b) For the **Min** field, enter **200,000**.

c) For the **Max** field, enter **500,000**.

d) For the **Style Area** field, select **Graph**.

e) For the **Style** field, click ⬜ (**Select a style**).

f) Select **Yellow**.

Standard colors:
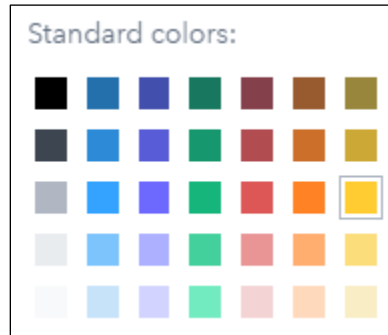
g) Click **OK**.

6) In the Display Rules pane, select **New rule ⇨ Total Profit**.

a) For the **Operator** field, verify that > (greater than) is selected.

b) For the **Value** field, enter **500,000**.

c) For the **Style Area** field, select **Graph**.

d) For the **Style** field, click ⬜ (**Select a style**).

e) Select **Green**.

Standard colors:

f) Click **OK**.

The Display Rules pane should resemble the following:

Display Rules

Total Profit per Group ▾

+ New rule
Object

Total Profit

🟩 Total Profit > 500000

Total Profit

🟨 Total Profit BetweenInclusive(200000, 50...

Total Profit

🟥 Total Profit < 200000

Report

Any Category

🟦 Sales Rep. III

🟦 Sales Rep. IV

🟧 Temp. Sales Rep.

🟧 Trainee

🟧 Purchasing Agent I

🟧 Purchasing Agent III

The bar chart should resemble the following:
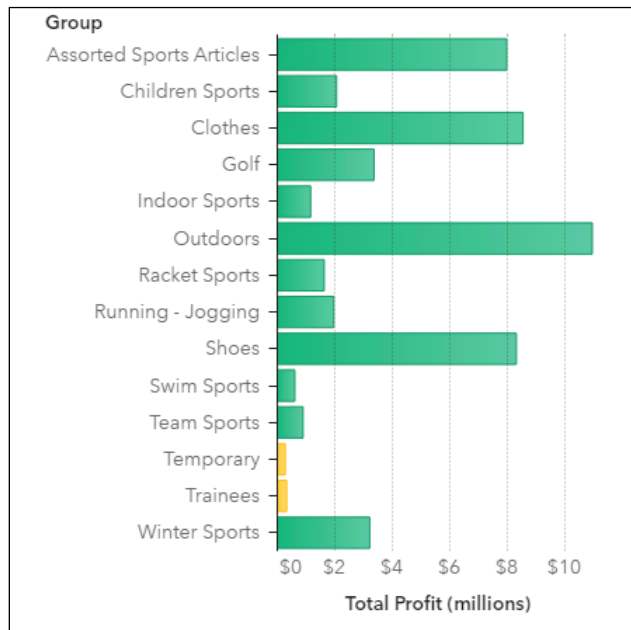
e. Save the report

f. View the report and answer the questions.

1) In the upper left corner, click [icon] (**View report**) to view the report.

2) Answer the following questions:

How many employees retired in Spain? How many retired with the Sales Rep. I job title?

Answer: Twelve employees retired in Spain. Four employees retired with the **Sales Rep. I job title.**

Number of Employees:	12
Employee Country:	ES
Average Profit:	$36,731.66

- **At the top of the report, click the Employee Analysis tab to make the page active.**
- **In the Employee Status Selector (report prompt), select Retired.**
- **In the geo map, click the ES coordinate.**
  The data tip shows details about Spain.

Number of Employees:	12
Employee Country:	ES
Average Profit:	$36,731.66

- **In the upper right corner of the bar chart, click [icon] (Maximize).**

The details table shows the total number of employees for each job title.

Job Title	Number of Employees
Temp. Sales Rep.	5
Sales Rep. I	4
Sales Rep. II	1
Sales Rep. III	1
Trainee	1

- **In the upper right corner of the bar chart, click ⬔ (Restore).**

View the Profit Analysis page. Among active employees in Orion Spain, how many groups generated a total profit above $500,000?

Answer: Three groups (Assorted Sports Articles, Golf, and Shoes)
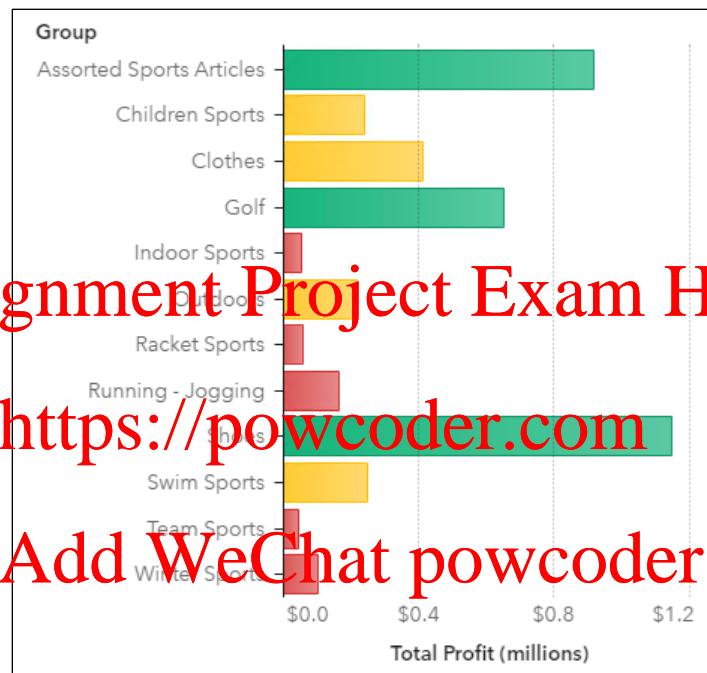
- **At the top of the report, click the Profit Analysis tab to make the page active.**
- **In the Employee Status Selector (report prompt), select Active.**
- **In the Company Selector (page prompt), select Orion Spain.**

g. In the upper right corner, click ⋮ (**Menu**) and select **Close** to close the report.

End of Solutions

Solutions to Activities and Questions

4.02 Activity – Correct Answer

Does Golf or Team Sports have more orders? **Team Sports**
Which chart did you use?
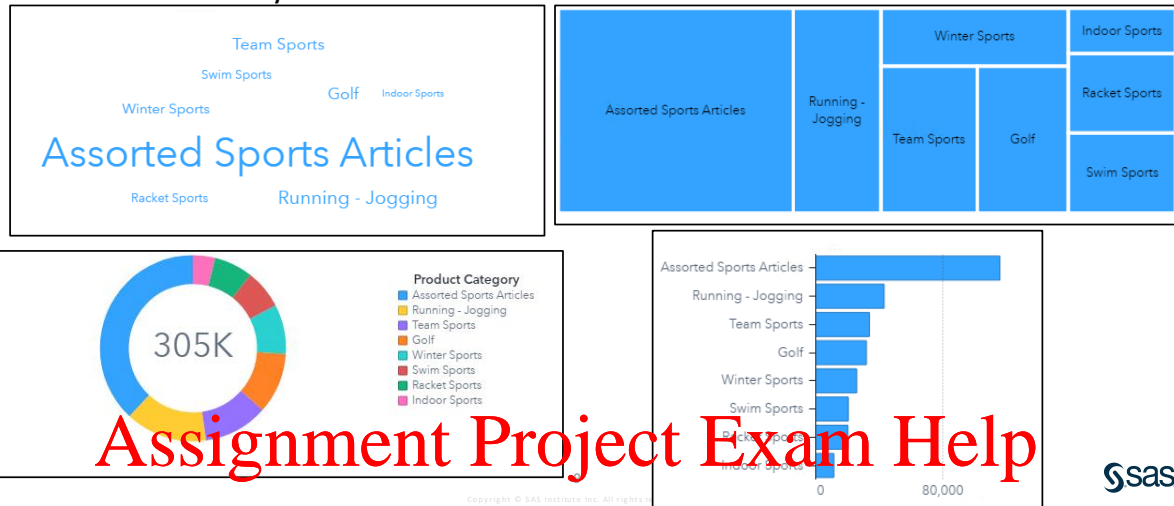
4.03 Multiple Choice Question – Correct Answer

What type of chart would you use to show profit information by continent?

a. bubble plot
b. pie chart
c. bar chart
d. treemap

Bubble plots require three measures.

Pie charts and treemaps cannot display negative values.

4.04 Activity – Correct Answer

Given the distinct values, which control object would you use to filter for each category displayed below?

Text input control	Product Category - 12	Drop-down list control
	Product Group - 57	
	Product Line - 4	Button bar control
Text input control	Product Name - 3.2K	
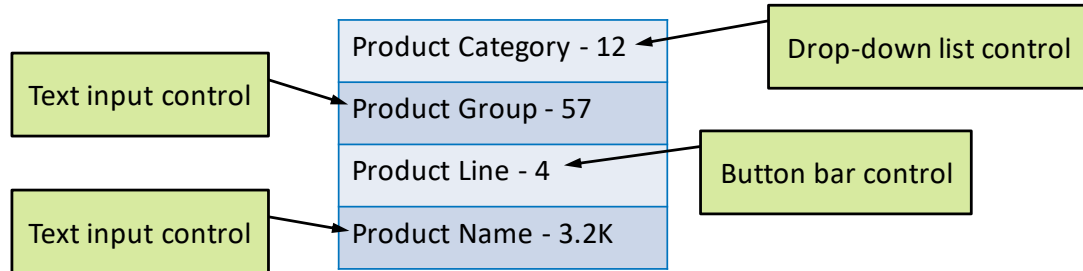
Practice Review

4.1 Creating a Simple Report – Solution

Which country has the highest average profit? **Germany (DE)**

Employee Country	Average Profit ▼	Number of Employees
DE	$101,306.73	75
	$101,2 .97	61
		58

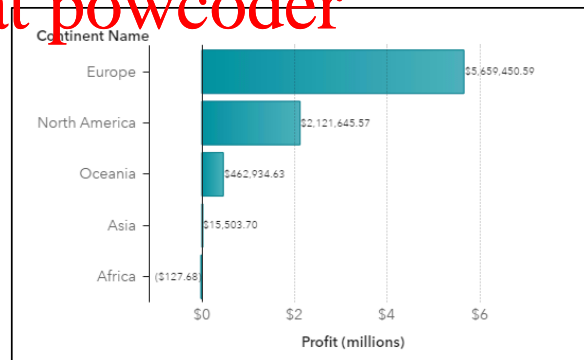| Employee Country	Average Profit ▲	Number of Employees
DK	$30,493.46	37
BE	$32,199.92	44
AU	$42,026.84	77

The lowest? **Denmark (DK)**

Which country has the highest number of employees? **United States (US)**

Employee Country	Average Profit	Number of Employees ▼
US	$96,861.47	123
AU	$42,026.84	77
DE	$101,306.73	75

Employee Country	Average Profit	Number of Employees ▲
DK	$30,493.46	37
BE	$32,199.92	44
NL	$67,704.25	51

The lowest? **Denmark (DK)**

4.1 Creating a Simple Report – Solution

In which month were the most employees hired?

January

Anniversary Month	Number of Employees ▼	Average Profit
January	162	$98,050.30
December	103	$32,874.06
October	47	$80,794.74

Which anniversary month contains employees that generate the highest average profit?

July

Anniversary Month	Number of Employees	Average Profit ▼
July	42	$101,237.03
November	46	$100,176.59
January	162	$98,050.30

4.2 Working with Pages – Solution

Which group produces the highest total profit?

Outdoors

Group	Total Profit ▼
Outdoors	$10,044,993.96
Clothes	$8,560,841.97
Shoes	$8,328,452.00

Which group produces the lowest total profit?

Temporary

Group	Total Profit ▲
Temporary	$300,808.87
Trainees	$349,886.90
Swim Sports	$634,229.24

4.2 Working with Pages – Solution

With the Viewer Customization level set to **Simple edits**, viewers can sort data and modify minor options (like data labels).

Total Profit by Group

Group	Total Profit (millions)
Outdoors	$10,966,493.96
Clothes	$8,560,841.97
Shoes	$8,328,452.00
Assorted Sports Articles	$7,992,337.73
Golf	$3,386,979.52
Winter Sports	$3,234,765.09
Children Sports	$2,082,864.31
Running - Jogging	$1,986,377.77
Racket Sports	$1,653,987.48
Indoor Sports	$1,182,983.91
Team Sports	$920,159.28
Swim Sports	$634,229.24
Trainees	$349,886.90
Temporary	$300,808.87

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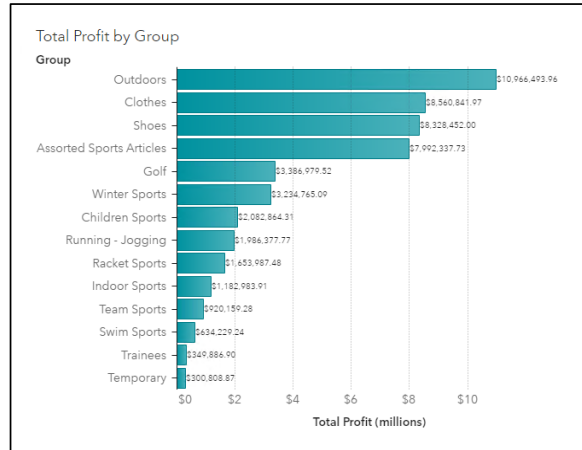
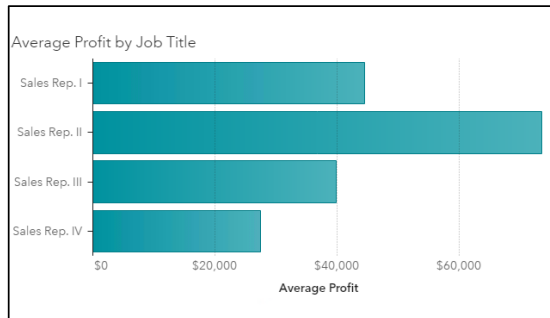## 4.3 Working with Prompts and Actions – Solution

Which job title has the highest average profit among active employees in Australia?

Sales Rep. II

Filters: Employee Status=Active, Employee Country=AU

Average Profit by Job Title

(bar chart showing Average Profit for Sales Rep. I, Sales Rep. II, Sales Rep. III, Sales Rep. IV with axis labels $0, $20,000, $40,000, $60,000)

39

4.3 Working with Prompts and Actions – Solution

For Orion USA, which active sales representative had the highest total profit generated for the Indoor Sports group?
Tywanna Mcdade

Filters: Employee Status=Active, Company=Orion USA, Group=Indoor Sports

Top 5 Employees by Total Profit Generated

Name	Total Profit ▼
Tywanna Mcdade	$178,299.60
Daniel Pulliam	$172,949.97
Clement Davis	$17,429.24

For Orion France, how many active sales representatives sold items for the Racket Sports group?
One employee (Marc Zampa)

Filters: Employee Status=Active, Company=Orion France, Group=Racket Sports

Top 5 Employees by Total Profit Generated

Name	Total Profit ▼
Marc Zampa	$66,109.84

40

4.4 Working with Hidden Pages and Page Links – Solution

How many employees retired in Italy with the Sales Rep. III job title?
Two employees

Filters: Employee Status=Retired, Employee Country=IT, Job Title=Sales Rep. III

Employee Information

Name	▲ Company	Job Title	Ann
Giulia Buonocunto	Orion Italy	Sales Rep. III	$
Giuseppe Franco Scoditti	Orion Italy	Sales Rep. III	$
		Sum:	$

Filters: Employee Status=Active, Employee Country=US, Job Title=Sales Rep. I, Years of Service=25+

Employee Information

Name	Company	Job Title	Annual Salary	Total Profit ▼
Ray Abbott	Orion USA	Sales Rep. I	$25,660.00	$371,506.09
Eric Michonski	Orion USA	Sales Rep. I	$26,990.00	$280,590.08
Donald Court	Orion USA	Sales Rep. I	$27,100.00	$271,089.42
Tachaun Voron	Orion USA	Sales Rep. I	$25,125.00	$260,146.86
Glorina Myers	Orion USA	Sales Rep. I	$26,025.00	$220,995.63

Of the active employees with 25 or more years of service, how many generate a total profit more than $200,000?
Five employees

48

31