

## Exercise 4

Download the files from <http://www.peter-lo.com/Teaching/AMA-Excel/Source4.zip>, you will use these files to finish the following exercises.

1. Open the Excel file “Question 4-1.xlsx”. This spreadsheet contains the cost per gallon for olive oil. You are required to develop a formula for total cost calculation using function IF according to the provided logic.

| Olive Oil                              | Cost/Gallon |
|--|-------------|
| Cost/gallon for the first 500 gallons: | \$23        |
| Cost/gallon for gallons above 500:     | \$20        |
| Number of Gallons:                     | 501         |
| Total Cost:                            | 11520       |

2. Open the Excel file “Question 4-2.xlsx”. Create a nested =IF formula to calculate the final salary for each footballer:
  - If the footballer receives more than 30 yellow cards, then the fine is 10% of his salary
  - If the footballer receives 10 - 30 yellow cards, then the fine is 2% of his salary
  - If the footballer receives less than 10 yellow cards, no penalty will be taken.

| Footballer        | Salary | Yellow Cards | Red Cards | Final Salary |
|-------------------|--------|--------------|-----------|--------------|
| Wayne Rooney      | 85,000 | 8            | 0         | 85,000       |
| Robin van Persie  | 87,500 | 4            | 0         | 87,500       |
| Lionel Messi      | 92,300 | 18           | 2         | 90,454       |
| Cristiano Ronaldo | 98,600 | 25           | 6         | 96,628       |
| Fernando Torres   | 74,500 | 7            | 0         | 74,500       |
| Gareth Bale       | 38,000 | 3            | 0         | 38,000       |
| David Silva       | 46,400 | 5            | 1         | 46,400       |
| Frank Lampard     | 64,500 | 14           | 2         | 63,210       |
| Carlos Tevez      | 78,300 | 58           | 19        | 70,470       |
| Didier Drogba     | 66,350 | 12           | 2         | 65,023       |

3. Open the Excel file “Question 4-3.xlsx”. By using **AND** function, check whether the input value (Column C) is between minimum value (Column A) and Maximum value (Column B).

|   | A                    | B                    | C                  | D                    |
|---|----------------------|----------------------|--------------------|----------------------|
| 1 | <b>Minimum Value</b> | <b>Maximum Value</b> | <b>Input Value</b> | <b>Within Range?</b> |
| 2 | 10                   | 14                   | 50                 | FALSE                |
| 3 | 32                   | 45                   | 38                 | TRUE                 |
| 4 | 12                   | 44                   | 85                 | FALSE                |
| 5 | 43                   | 98                   | 54                 | TRUE                 |
| 6 |                      |                      |                    |                      |

4. Open the Excel file “Question 4-4.xlsx”. This spreadsheet contains a list of furniture items.

A) Create a drop-down menu in the green cell that allows user select the product code.

| Wise Owl Furnishings |               |         |          | Enquiry System   |     |
|----------------------|---------------|---------|----------|------------------|-----|
| Code                 | Item          | Price   | In Stock | Code:            |     |
| K16                  | Stool         | £21.00  | 7        |                  | C39 |
| A17                  | Lamp          | £32.99  | 8        | Item:            |     |
| A18                  | Bookcase      | £112.50 | 40       | Price:           |     |
| A34                  | Armchair      | £89.99  | 5        | Number in Stock: |     |
| C39                  | Sofa          | £312.00 | 80       |                  |     |
| D80                  | Dining Table  | £199.99 | 12       |                  |     |
| F26                  | Shelves       | £45.00  | 9        |                  |     |
| B45                  | Kitchen       | £231.00 | 34       |                  |     |
| G36                  | Rocking Chair | £87.99  | 13       |                  |     |

B) Enter formulae in the yellow cells so that whenever you enter a product code in the green cell you see the product details beneath.

| Wise Owl Furnishings |               |         |          | Enquiry System   |         |
|----------------------|---------------|---------|----------|------------------|---------|
| Code                 | Item          | Price   | In Stock | Code:            |         |
| K16                  | Stool         | £21.00  | 7        |                  | C39     |
| A17                  | Lamp          | £32.99  | 8        | Item:            | Sofa    |
| A18                  | Bookcase      | £112.50 | 40       | Price:           | £312.00 |
| A34                  | Armchair      | £89.99  | 5        | Number in Stock: | 80      |
| C39                  | Sofa          | £312.00 | 80       |                  |         |
| D80                  | Dining Table  | £199.99 | 12       |                  |         |
| F26                  | Shelves       | £45.00  | 9        |                  |         |
| B45                  | Kitchen       | £231.00 | 34       |                  |         |
| G36                  | Rocking Chair | £87.99  | 13       |                  |         |

5. Open the Excel file “Question 4-5.xlsx”. Enter a formula in the yellow cell so that it shows the corresponding name for input student ID in the green cell. Prompt for message “**Not in this class**” if the student ID not found.

| ID       | Name         | ID       | Name              |
|----------|--------------|----------|-------------------|
| 96200745 | David Cheung | 96200745 | David Cheung      |
| 96114424 | Patrick Pang | 96114424 | Patrick Pang      |
| 96101242 | Simon Lee    | 96101242 | Simon Lee         |
| 96484247 | May Leung    | 96484247 | May Leung         |
| 96012149 | Paul Chan    | 96012149 | Paul Chan         |
| 96427732 | Chris Wong   | 96427732 | Chris Wong        |
|          |              |          |                   |
|          |              |          |                   |
| ID:      | 96114424     | ID:      | 1234              |
|          |              |          |                   |
| Name:    | Patrick Pang | Name:    | Not in this class |

6. Open the Excel file “Question 4-6.xlsx”. By using the **AGGREGATE** function, find the maximum score and lowest score for each region.

|    | A             | B            | C | D             | E                    |
|----|---------------|--------------|---|---------------|----------------------|
| 1  | <b>Region</b> | <b>Score</b> |   | <b>Region</b> | <b>Highest Score</b> |
| 2  | North         | 75%          |   | North         | 75%                  |
| 3  | South         | 85%          |   | South         | 85%                  |
| 4  | East          | 65%          |   | East          | 95%                  |
| 5  | West          | 55%          |   | West          | 55%                  |
| 6  | North         | 70%          |   |               |                      |
| 7  | South         | 80%          |   |               |                      |
| 8  | East          | 90%          |   |               |                      |
| 9  | West          | 50%          |   |               |                      |
| 10 | North         | 60%          |   |               |                      |
| 11 | South         | 85%          |   |               |                      |
| 12 | East          | 95%          |   |               |                      |
| 13 | West          | 45%          |   |               |                      |