|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Location** | **Salary** | **Age** |
| Paul Bell | Bangkok | 10387 | 25 |
| Estelle Cormack | Hong Kong | 10959 | 30 |
| William Johnson | Berlin | 11771 | 32 |
| Thomas Davies | Capetown | 12566 | 37 |
| Thomas Bettle | Bangkok | 13046 | 35 |
| William Manship | Hong Kong | 13836 | 25 |
| Christopher Fallon | Delhi | 14562 | 32 |
| Williamr Black | Cairo | 15784 | 43 |
| Eric Green | Hong Kong | 16406 | 42 |
| Ian Nash | Cairo | 18276 | 32 |
| Michael Kaye | Capetown | 18996 | 35 |
| Margaret Turley | Shanghai | 19327 | 26 |

**Create a Helper Column to Mark "Hong Kong" Occurrences:**

In a new column (e.g., column E), use the following formula to mark the occurrences of "Hong Kong". Start from cell E2:

=IF(B2="Hong Kong", COUNTIF($B$2:B2, "Hong Kong"), "")

Find the Row of the 2nd Occurrence of "Hong Kong":

=MATCH(2, E2:E13, 0)

Retrieve the Salary for the 2nd Occurrence:

=INDEX(C2:C13, F1)

Mark Occurrences of "Cairo" or "Hong Kong" (Column E):

=IF(OR(B2="Cairo", B2="Hong Kong"), COUNTIF($B$2:B2, "Cairo") + COUNTIF($B$2:B2, "Hong Kong"), "")

To find the 2nd occurrence of each location and retrieve the corresponding salary for all locations, you can use a helper column along with `INDEX` and `MATCH` functions. Here's how you can do it:

### Steps:

1. \*\*Create a Helper Column to Mark Occurrences of Each Location:\*\*

In a new column (e.g., column E), use the following formula to mark the occurrences of each location. Start from cell E2:

```excel

=COUNTIF($B$2:B2, B2)

```

Drag this formula down to the last row of your data (E13). This will count the occurrences of each location in each row.

2. \*\*Find the Row Number of the 2nd Occurrence for Each Location:\*\*

In another cell (e.g., F1), use the following formula to find the row number of the 2nd occurrence for a specific location (e.g., "Hong Kong"):

```excel

=MATCH(2, IF($B$2:$B$13="Hong Kong", $E$2:$E$13), 0)

```

Enter this formula as an array formula by pressing `Ctrl+Shift+Enter`.

3. \*\*Retrieve the Salary for the 2nd Occurrence:\*\*

Using the row number from the previous step, use the `INDEX` function to get the corresponding salary. Assuming the row number from the previous formula is in cell F1, use this formula:

```excel

=INDEX(C2:C13, F1)

```

### Steps with Your Data:

1. \*\*Mark Occurrences of Each Location (Column E):\*\*

In cell E2, enter the formula:

```excel

=COUNTIF($B$2:B2, B2)

```

Drag this formula down to E13. Your helper column E should look like this:

```

E2: 1 (Hong Kong)

E3: 2 (Hong Kong)

E4: 1 (Berlin)

E5: 1 (Capetown)

E6: 2 (Bangkok)

E7: 3 (Hong Kong)

E8: 1 (Delhi)

E9: 1 (Cairo)

E10: 4 (Hong Kong)

E11: 2 (Cairo)

E12: 2 (Capetown)

E13: 1 (Shanghai)

```

2. \*\*Find the Row Number of the 2nd Occurrence (F1):\*\*

In cell F1, enter the formula (for "Hong Kong"):

```excel

=MATCH(2, IF($B$2:$B$13="Hong Kong", $E$2:$E$13), 0)

```

Enter this formula as an array formula by pressing `Ctrl+Shift+Enter`. This should return `3`, which is the row number of the 2nd occurrence of "Hong Kong".

3. \*\*Retrieve the Salary for the 2nd Occurrence:\*\*

In another cell (e.g., G1), use this formula:

```excel

=INDEX(C2:C13, F1)

```

This should return `10959`.

### General Formula for Any Location:

To make it more general, you can replace "Hong Kong" with a cell reference that contains the location you are looking for. For example, if you have "Hong Kong" in cell H1, you can use:

```excel

=MATCH(2, IF($B$2:$B$13=H1, $E$2:$E$13), 0)

```

### Retrieving the Salary for Different Locations:

If you want to retrieve the salary for the 2nd occurrence of each location, you can use the following approach:

1. \*\*Helper Column for Occurrences (E):\*\*

As before, in cell E2, enter:

```excel

=COUNTIF($B$2:B2, B2)

```

Drag this down to E13.

2. \*\*List of Locations:\*\*

In a new column (e.g., column H), list all the unique locations: "Bangkok", "Hong Kong", "Berlin", "Capetown", etc.

3. \*\*Find 2nd Occurrence Row Number for Each Location:\*\*

Next to each location in column I, use the following formula (assuming the location is in H2):

```excel

=IF(COUNTIF($B$2:$B$13, H2)>=2, MATCH(2, IF($B$2:$B$13=H2, $E$2:$E$13), 0), "N/A")

```

Enter this formula as an array formula by pressing `Ctrl+Shift+Enter`. Drag this formula down to match the list of locations.

4. \*\*Retrieve the Salary for the 2nd Occurrence:\*\*

Next to each row number in column J, use the following formula:

```excel

=IF(I2="N/A", "N/A", INDEX($C$2:$C$13, I2))

```

Drag this formula down to match the list of locations.

### Example:

- Helper column E:

```excel

=COUNTIF($B$2:B2, B2)

```

- List unique locations in H2:H8: ("Bangkok", "Hong Kong", "Berlin", "Capetown", etc.)

- Find 2nd occurrence row number in I2:

```excel

=IF(COUNTIF($B$2:$B$13, H2)>=2, MATCH(2, IF($B$2:$B$13=H2, $E$2:$E$13), 0), "N/A")

```

(Ctrl+Shift+Enter and drag down)

- Retrieve salary in J2:

```excel

=IF(I2="N/A", "N/A", INDEX($C$2:$C$13, I2))

```

(Drag down)

By following these steps, you can find the 2nd occurrence of each location and retrieve the corresponding salary in Excel without using complex array formulas.