# Creative Coding 2

# Disease.xls Demo:

Say we want to create some graphs based on the data in Disease.xls. There are many options (6 columns) so we just use the relevant columns for the type of graph we want to create. For example we will not be creating a map at this stage so we don’t need the Longitude and Latitude columns.

In this case the data is clean i.e. there are no gaps or incorrect formatting, but it will be easier if we change the date format from dd/mm/yyyy to yyyy as we only need the year part of the date for our purposes – see below.

**Option 1:**

For example if we want to create a graph showing disease breakdown by year, we will need to create the relevant table – see Table 1 and Figure 1 below.

Table 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Disease Breakdown from 2012 to 2016** | | |  |  |  |
| **Year** | **2012** | **2013** | **2014** | **2015** | **2016** |
| Cryptosporidiosis | 28 | 75 | 17 | 39 | 51 |
| Giardiasis | 12 | 10 | 18 | 36 | 40 |
| Verotoxigenic Escherichia coli infection | 41 | 75 | 74 | 72 | 104 |

Figure 1

**Steps:**

1. First create a table with labels only – see Table 2. We have to populate this table with values from the given data.

Table 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Disease Breakdown from 2012 to 2016** | | |  |  |  |
| **Year** | **2012** | **2013** | **2014** | **2015** | **2016** |
| Cryptosporidiosis |  |  |  |  |  |
| Giardiasis |  |  |  |  |  |
| Verotoxigenic Escherichia coli infection |  |  |  |  |  |

1. Next change the date format from the data:

Select all the cells in **Date** column and click ***format*** -> ***format cells*** from ***cells*** panel from ***Home*** from the main menu***.***

Select ***custom*** from menu and type in yyyy instead of dd/mm/yyyy.

1. Note that in this case, the years are already sorted so in the empty cell below **2012** (in the table) count all cells in disease column for 2012 using countif(‘select all the cells in the disease column for 2012 – fix using dollar signs (F4)’, ‘select the cell with Cryptosporidiosis on table 2’).
2. Next use autofill (down the column) to fill disease incidence for Giardiasis and E Coli.
3. Follow the same steps (3-4) for 2013 to 2016.
4. Now create a bar chart based on this table – see Figure 1 above.

**More charts:**

Note we can also create a line chart (Figure 2) and a bar chart where the series are the years instead of the diseases (Figure 3).

Figure 2

Figure 3

**Option 2:**

Say if we want to show disease breakdown by gender. See Table 4 and Figure 4 below.

**Steps:**

1. First create a table with labels only. We have to populate this table with values from the given data – see Table 3.
2. First sort the Gender column - to sort the **Gender** column, we select the Gender column, select ***Data*** from the main menu. Then select ***Sort*** from the ***Sort and Filter*** panel and sort by ‘***Gender’***, ***Sort on ‘Cell Values’,*** and ***Order ‘A – Z’.***
3. In the empty cell below **Cryptosporidiosis** (in Table 3) count all cells in disease column for F using countif(‘select all the cells in the disease column for F – fix using dollar signs (F4)’, ‘select the cell with Cryptosporidiosis on table 3’).
4. Next use autofill (across the row) to fill disease incidence for Giardiasis and E Coli.
5. Follow the same steps (3) for Male.
6. Now create a bar chart based on this table – see Figure 4 below.

Table 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Disease Breakdown from 2012 to 2016 by Gender** | | | | |
| **Disease** | **Cryptosporidiosis** | **Giardiasis** | **Verotoxigenic Escherichia coli infection** |  |
| **female** |  |  |  |  |
| **male** |  |  |  |  |

Table 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Disease Breakdown from 2012 to 2016 by Gender** | | | | |
| **Disease** | **Cryptosporidiosis** | **Giardiasis** | **Verotoxigenic Escherichia coli infection** |  |
| **female** | 93 | 47 | 206 |  |
| **male** | 65 | 69 | 159 |  |

Figure 4

**Useful (covered):**

=countif()

=frequency()

=left()/right()

=max()

=min()

=quartile.exc()

=median()

=average()

Sort (Data)

Format -> Format Cells (Home)

**Also:**

count()

countA()

Filter (Data)

Text to columns (Data)

Etc.