

## Income Singapore Companies 2

The table below is a **partial** capture of the income information (S\$ Thousand) of Singapore companies for the 12-year period from 2007 to 2018, ordered by year.

The complete table is available on the LMS as cpyincomesg\_dataset.pdf and as cpyincomesg\_dataset.csv.

Year	No. of Companies	Total Income	Donations	Chargeable Income
2007	123558	31852563	144932	69238304
2008	132335	41789422	304607	82078918
2009	147606	31257184	642328	82021450
2010	155790	20400799	870509	81163272
2011	161211	25895750	1205382	93486773

In this project, your Python program is required to:

- Initialise appropriate lists with the **full** data
- Write a Python program that shows four different menu options plus a Quit option.

Based on the user selection, your program shall

1. Display all information for the year 2011.
2. For the user selected category (e.g., Total Income),
  - a) display the average value in the 6-year span of 2013 to 2018.
  - b) display the minimum value in that period and the year in which it occurred.
3. For a user selected category (e.g., Total Income), display the three highest values and the years in which they occurred.
4. Make the following plots
  - a) Chargeable Income, Total Income (for each year) vs Year as line plots.
  - b) Number of Companies, Donations vs Year as a bar chart.

You will be awarded higher marks if you have the following features in your program:

- Retrieve the data from the CSV file and store them into lists
- Use numpy or 2D lists/arrays
- Plot the data with properly labelled titles, labels and legends
- Use functions that you define (and initialise lists for storing data if your program doesn't retrieve them from the CSV file) in a module called data.py