

Singapore Electricity Consumption 1

The table below is a **partial** capture of the Monthly Electricity Consumption by public and private dwelling types (GWh) in Singapore for the year 2019.

The complete table is available on the LMS as sgallelectricity_dataset.pdf and as sgallelectricity_dataset.csv.

Month	Public Housing	Private Apts/Condo	Landed Properties	Others
Jan	343.4	163	86.9	0.8
Feb	356	167.6	89.1	0.8
Mar	340.9	167.8	88.7	0.8
Apr	374.6	183.6	94	0.9
May	385.9	190	93.7	0.9

In this project, your Python program is required to:

- Initialise appropriate lists with the **full** data
- Show four different menu options plus a Quit option.

Based on the user's selection, your program shall

1. Display the monthly electricity consumptions of all dwelling types in May.
2. Of the user's selected dwelling type (e.g., Public Housing), display
 - a) the average electricity consumption in each of the 4-month periods from Apr to Jun & from Oct to Dec.
 - b) the maximum electricity consumption in each of the periods and the months in which it occurred.
3. Of the user's selected dwelling type, display the electricity consumption and the months in which the monthly electricity consumption is at least 6% higher than the annual mean electricity consumption.
4. Make the following electricity consumption plots with the appropriate labels
 - a) Private Apts/Condo, Landed Properties (of each month) vs Month as line plots.
 - b) Total Electricity Consumption, Public Housing (of each month) vs Month as a bar chart.

You will be awarded higher marks based on the quality of your program. Refer to the rubric for more information.

You **should not** use pandas for the project. However, you are allowed to use numpy or other python libraries/modules as needed.

Clarify any doubts about the requirements with your tutor.