1. I worked alone for this assignment.
   Name: Sheng Xu UID: u5538588

3.

Station	Rainfall Data (Happened year)	
	Method A(Threshold)	**Method B (Threshold)**
Sydney	642.7mm(1950) 510.6mm(2007)	642.7mm(1950) 510.6mm(2007) 423.3mm(1949) 414.0mm(1885) 407.5mm(1964) 401.6mm(1937) 391.0mm(1864)
Queanbeyan	161.6mm(1891) 137.9mm(1956) 136.9mm(1931)	161.6mm(1891) 137.9mm(1956) 136.9mm(1931) 126.3mm(1925) 124.8mm(1998) 115.6mm(1997) 113.5mm(1975)

4.

Grouping	Function(and subs) name	Input value/type	Return value/type	Functionality
Reading User Input	path_check(path_str)	File path / String	Valid path including file name / String	Read & check validity
	aggregation_check (aggregation)	Aggregation type / String	Valid aggregation type / String	Read & check validity
	month_check(mon)	Month for aggregation type 3 / String	Valid month / String	Read & check validity
	threshold_type_check (t_threshold)	Type of threshold / String	Valid type of threshold / String	Read & check validity
	freq_check(frequency)	Frequency / String	Valid frequency / String	Read & check validity
Filtering Raw Data	data_restore_daily (filename)	Filename / String	List of valid data / Lists	Filtering data
	data_restore_monthly (filename): 1. error_data_monthly(…) 2. remove_invalid(olist,elist) 3. reformat(nlist)	1. Fields of data/ Strings 2. Lists of raw data and invalid data / lists 3. List of valid data / list	1. List of invalid data 2. List of valid data 3. List of reformatted data	1. Record invalid data in raw list 2. Remove invalid data 3. Change datetime format if aggregation type is 3
	data_restore_yearly (filename): 1. error_data_yearly(…) 2. remove_invalid(olist,elist)	1. Fields of data/ Strings 2. Lists of raw data and invalid data / lists	1. List of invalid data 2. List of valid data	1. Same as above 2. Same as above
Computing threshold	sort_info()	Null(global variable:list)	List of sorted data	Sort data from smallest to largest
	method_B(): 1. check_conB(lists)	Null(global var: valid data list & frequency / list & String); 1. List of raw solutions	Null; 1. List of corrected results / list	Generate raw solutions and Print Results; 1. Double check

		and raw threshold order / list & int		validity of the results
	method_A(): 1. raw_sol()	Null(global var: valid data list / list); 1. Null(global var: valid data list & frequency / list & String);	Null; 1. List of corrected results / list	Generate raw solutions and Print Results; 1. Double check validity of the results

5. The functions error_data_monthly() and error_data_yearly() should be able to be merged as one function since they are quite similar. The new function is supposed to record invalid data according to the input fields (especially the ‘month’ field).
However, due to the limited time and due of other assignments, I was not able to optimize it on time. Nevertheless, the way I have implemented makes sure that the found invalid data would not be affected by any irrelevant fields. In other words, it ensures the precise of the functions.