

Group 1 → scatter graph

Group7→ scatter graph

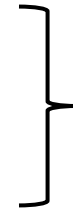
	CC2104 Name list			
1	SUN HAOTIAN	1	Asia1	1978-1987
12	KWEE YAN TING			
13	NG KAI JUN			
3	NEO YU HENG	2	Asia2	1988-1997
4	LIONEL LOH MUN KIT			
5	NG HAN TONG CLIFF	3	Asia3	1998-2007
29	JERRELL CHEN			
26	TOH YIN LIAN	4	Asia4	2008-2017
17	JASMIN TEY XINYI			
18	NIKKI LEONG NIQI	5	Asia5	2011-2020
19	TANG QIU HUI, CECILIA			
14	ELYSIA SIM HUI EN	6	Europe1	1978-1987
23	OH KAI JIE			
2	YAN NAING AUNG	7	Europe 2	1988-1997
28	CHEONG XIANG RONG			
6	MUHAMMAD AZRI			
7	ALARIC ONG YEW TONG	8	Europe 3	1998-2007
8	TRISTAN YEO JIE SHENG			
9	NUR AMEERA	9	Europe 4	2008-2017
30	NG YI MING CHERYL			
10	NG YIN XIAN	10	Europe 5	2011-2020
11	JOEL TENG ZHAO YONG			
15	LEE ZHENG FENG	11	Others 1	1978-1987
16	KOH HONG YANG			
20	SEAH JIA HONG, BENJAMIN	12	Others 2	1988-1997
32	ALAN CHENG SOO HONG			
24	REGAN ONG JIAN XIONG	13	Others 3	1998-2007
21	MUHAMMAD HADI			
31	LEE ZONG HAN JOSTON	14	Others 4	2008-2017
25	NG QI JIE			
27	LEE CHING YEW TERENCE	15	Others 5	2011-2020
22	TAN KIA HONG RYAN			

# Project requirement for members:

1. Plan each member's tasks (Put in the powerpoint)
2. All the students must do coding and share the codes that works along the way using Github VCS.
3. Producing output graphs
  - Student1 : all countries bar graph
  - Student2: top3 countries bar graph.
  - Student3: scatter graph for one country
  - All students must create unittest cases
  - 2 members group : create 2 functions, one testing for passed case while the other for a failed case. Then combine as one.
  - 3 members group : create 3 functions, two testing passed case while the other for a failed case. Then combine all as one.
4. Code explanation: Copy the entire code into a word file then explain each block.

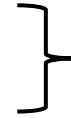
# Code Explanation

```
import pandas as pd  
import numpy as np  
import matplotlib.pyplot as plt
```



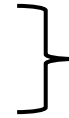
Import the python libraries

```
cars = pd.read_csv('mtcars.csv')  
print(cars)
```



Reads the mtcars.csv into dataframe

```
print(cars.head())  
print(cars.tail())
```



Display first 5 & last mtcars.csv into dataframe

# Screenshot the followings (sample):

1. The dataframe column headers (your work region)

```
Index(['Periods', 'Brunei Darussalam', 'Indonesia', 'Malaysia', 'Myanmar',  
      'Philippines', 'Thailand', 'Vietnam', 'China', 'Hong Kong SAR',  
      'Taiwan', 'Japan', 'South Korea', 'Bangladesh', 'India', 'Pakistan',  
      'Sri Lanka', 'Iran', 'Kuwait', 'Israel', 'Saudi Arabia',  
      'United Arab Emirates'],  
      dtype='object')
```

2. The dataframe for the first 3 and last 3 years range (e.g. 2000-2009)

```
***** first and last 3 years dataframe *****  
Periods Brunei Darussalam ... United Arab Emirates Year  
264 2000 Jan          4,138 ...           1,445 2000  
265 2000 Feb          3,538 ...             958 2000  
266 2000 Mar          3,628 ...           1,577 2000  
  
[3 rows x 23 columns]  
Periods Brunei Darussalam ... United Arab Emirates Year  
381 2009 Oct          3,988 ...           3,078 2009  
382 2009 Nov          5,260 ...           4,631 2009  
383 2009 Dec          9,705 ...           4,299 2009  
  
[3 rows x 23 columns]
```

1. The sorted values



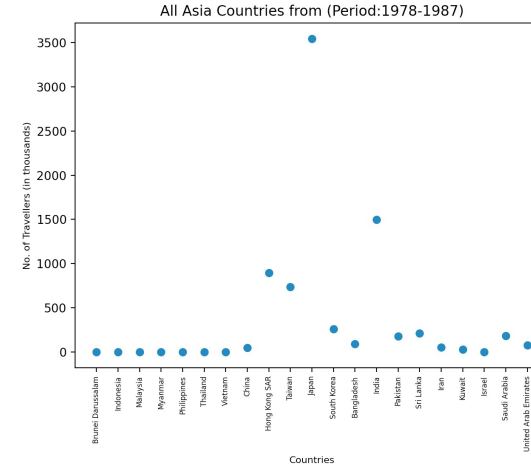
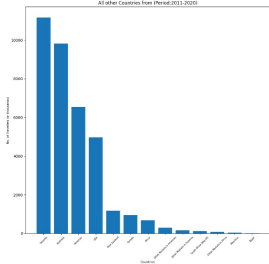
```
***** Sorted values *****  
Indonesia      16386403  
China           8074877  
Japan           6280326  
Malaysia        5938669  
India           5337401  
South Korea     3685019  
Thailand        3089969  
Philippines     2965564  
Hong Kong SAR  2805970  
Taiwan          2023897  
Vietnam         1200994  
Sri Lanka       669255  
Bangladesh     554158  
Brunei Darussalam 521716  
Myanmar         413678  
United Arab Emirates 308086  
Pakistan        222235  
Saudi Arabia    115387  
Iran            98909  
Kuwait          60801  
Israel           0  
dtype: int64
```

#### 4. Total and mean value of the top 3 countries

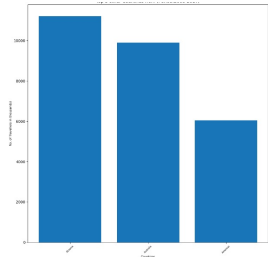
The total no. of visitors for the top 3 countries is 30741606  
The mean value for the top 3 countries is 10247202.0

\*\*\*\*\* Top 3 countries \*\*\*\*\*  
Indonesia 16386403  
China 8074877  
Japan 6280326

#### 5. Bar chart of all countries & Scatter chart



#### 6. Bar chart of Top 3 countries



#### 7. Unittest result

#### 8. Github Repository + Pycharm compare file + Demo

#### 9. Copy code into a word file with code explanation on functions

#### 10. PowerPoint presentation slides (5 mins)

# **Project Submission for ASP (1 submission per group)**

1. Create a folder named as <group no(your name)\_ASP\_Project>. Zip  
(Your name - only need 1 name. e.g., Group1\_Haotian\_ASP\_Project.zip>

Folder must have the files :

- group no\_ASP\_project.py
- group no\_ASP\_project\_testcase.py
- group no\_ASP\_screenshots.docx
- group no\_ASP\_PPT\_slide.ppt
- group no\_ASP\_codeExplanation.docx
- Bar charts images

Submit your ASP project to MyConnexion by 19 Aug 2021 by 4pm

2. Project presentation on 20 Aug 2021 @9:00am

Follow countries for the 3 regions below:

Regions	Countries
Asia (21)	'Brunei Darussalam', 'Indonesia', 'Malaysia', 'Myanmar', 'Philippines', 'Thailand', 'Vietnam', 'China', 'Hong Kong SAR', 'Taiwan', 'Japan', 'South Korea', 'Bangladesh', 'India', 'Pakistan', 'Sri Lanka', 'Iran', 'Kuwait', 'Israel', 'Saudi Arabia', 'United Arab Emirates'
Europe (14)	'Belgium & Luxembourg', 'Denmark', 'Finland', 'France', 'Germany', 'Italy', 'Netherlands', 'Norway', 'Rep Of Ireland', 'Russian Federation', 'Spain', 'Sweden', 'Switzerland', 'United Kingdom'
Others (13)	'Americas', 'Canada', 'USA', 'Other Markets In Americas', 'Oceania', 'Australia', 'New Zealand', 'Other Markets In Oceania', 'Africa', 'Egypt', 'Mauritius', 'South Africa (Rep Of)', 'Other Markets In Africa'