Notebook to edit CSV file containing data of Online Marketing Campaigns

In [1]:
```
# Importing Depencies

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

In [2]:
```
# Reading File

file = pd.read_csv('Book1.csv')
file.head() # total of 377 rows of data
```

Out[2]:

	company	department	brand	partner	campaign	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	1277	0.50	638.50	32	300.61	0.4708	47.1

In [3]:
```
# Formating 'campaign'

file.campaign.apply(str)
file.head()
```

Out[3]:

	company	department	brand	partner	campaign	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	1277	0.50	638.50	32	300.61	0.4708	47.1

In [4]:
```
# Creating 'Campaign ID' column

file.insert(5, "Campaign ID", True)
file.head()
```

Out[4]:

	company	department	brand	partner	campaign	Campaign ID	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	True	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	True	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	True	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	True	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	True	1277	0.50	638.50	32	300.61	0.4708	47.1

In [5]:
```
# Filling in 'Campaign ID' with respective code of 'Campaign'

file['Campaign ID'] = file['campaign'].str.split("-", 4).str[-1]
file.head()
```

Out[5]:

	company	department	brand	partner	campaign	Campaign ID	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	1277	0.50	638.50	32	300.61	0.4708	47.1

In [6]:
```
# Creating 'Region' column

file.insert(6, "Region", True)
file.head()
```

Out[6]:

	company	department	brand	partner	campaign	Campaign ID	Region	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	True	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	True	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	True	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	True	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	True	1277	0.50	638.50	32	300.61	0.4708	47.1

In [7]:
```
# Filling in 'Region' with respective code of 'Campaign'

file['Region'] = file['campaign'].str.split("-", 4).str[2]
file.head()
```

Out[7]:

	company	department	brand	partner	campaign	Campaign ID	Region	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	BR	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	BR	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	BR	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	PT	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	BR	1277	0.50	638.50	32	300.61	0.4708	47.1

In [8]:
```
# Creating 'Language' column

file.insert(7, "Language", True)
file.head()
```

Out[8]:

	company	department	brand	partner	campaign	Campaign ID	Region	Language	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	BR	True	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	BR	True	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	BR	True	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	PT	True	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	BR	True	1277	0.50	638.50	32	300.61	0.4708	47.1

In [9]:
```
# Filling in 'Language' with respective code of 'Campaign'

file['Language'] = file['campaign'].str.split("-", 4).str[1]
file.head()
```

Out[9]:

	company	department	brand	partner	campaign	Campaign ID	Region	Language	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	BR	BR	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	BR	BR	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	BR	BR	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	PT	BR	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	BR	BR	1277	0.50	638.50	32	300.61	0.4708	47.1

In [10]:
```
# Replacing all 'BR' (Brasil) values to 'PT' (Portuguese) in 'Language' column

file['Language'].replace('BR', 'PT')
file.head()
```

Out[10]:

	company	department	brand	partner	campaign	Campaign ID	Region	Language	leads	cpl	cost	nb_customer	CAHT	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	BR	BR	8142	0.25	2035.50	57	428.64	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	BR	BR	1730	0.40	692.00	28	242.79	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	BR	BR	117	0.50	58.50	1	4.59	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	PT	BR	381	1.25	476.25	1	27.36	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	BR	BR	1277	0.50	638.50	32	300.61	0.4708	47.1

In [11]:
```
# Deleting 'CAHT' column

file.drop(['CAHT'], axis= 1, inplace= True)
file.head()
```

Out[11]:

	company	department	brand	partner	campaign	Campaign ID	Region	Language	leads	cpl	cost	nb_customer	renta_rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	BR	BR	8142	0.25	2035.50	57	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	BR	BR	1730	0.40	692.00	28	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	BR	BR	117	0.50	58.50	1	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	PT	BR	381	1.25	476.25	1	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	BR	BR	1277	0.50	638.50	32	0.4708	47.1

In [12]:
```
# Renaming all columns

new_file = file.rename(columns={'company': 'Company',\
                                'department': 'Geo Location',\
                                'brand': 'Brand',\
                                'partner': 'Partner',\
                                'campaign': 'Campaign',\
                                'leads':'Leads Generated',
                                'cpl': 'Cost Per Lead',\
                                'cost': 'Cost of Campaign',\
                                'nb_customer': 'New Customers',\
                                'renta_rate': 'Effectivenes Rate',\
                                'ROAS': 'ROAS'})
new_file.head()
```

Out[12]:

	Company	Geo Location	Brand	Partner	Campaign	Campaign ID	Region	Language	Leads Generated	Cost Per Lead	Cost of Campaign	New Customers	Effectivenes Rate	ROAS
0	1830	NORTH	gaga-br-web	ABC	gaga - BR - BR - adc - id8	id8	BR	BR	8142	0.25	2035.50	57	0.2106	21.1
1	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza - PUSH - id17	PUSH - id17	BR	BR	1730	0.40	692.00	28	0.3509	35.1
2	1830	NORTH	gaga-br-web	AZA	gaga - BR - BR - aza1 - id16	id16	BR	BR	117	0.50	58.50	1	0.0785	7.8
3	1830	NORTH	gaga-br-web	CA	gaga - BR - PT - ca - id22	id22	PT	BR	381	1.25	476.25	1	0.0574	5.7
4	1830	NORTH	gaga-br-web	LA	gaga - BR - BR - la - id9	id9	BR	BR	1277	0.50	638.50	32	0.4708	47.1

In [15]:
```
new_file.to_csv('Final_file.csv', index = False, encoding='utf-8')
```

In [ ]:
```
```