ACTIVE SALES ANALYSIS

STEP 1 👇

In [203…

```
#Lets import the required libraries required
#As well as importing the data inform of a csv file as shown below
#In form of a dataframe
import numpy as np
import pandas as pd
orders = pd.read_csv("orders.csv")
orders.head()
```

Out[203…

	Name	Email	Product	Transaction Date
0	PERSON_1	PERSON_1@gmail.com	PRODUCT_75	01/03/2021 00:47:26
1	PERSON_2	PERSON_2@tataprojects.com	PRODUCT_75	01/03/2021 02:04:07
2	PERSON_3	PERSON_3@gmail.com	PRODUCT_63	01/03/2021 09:10:43
3	PERSON_4	PERSON_4@gmail.com	PRODUCT_63	01/03/2021 09:49:48
4	PERSON_5	PERSON_5@gmail.com	PRODUCT_34,PRODUCT_86,PRODUCT_57,PRODUCT_89	01/03/2021 10:56:46

STEP 2 👇

In [205…

```
#Need to investigate the data we have
#Or any incorrect row or columns that have to be delt with
orders.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 581 entries, 0 to 580
Data columns (total 4 columns):
 #   Column            Non-Null Count  Dtype 
---  ------            --------------  ----- 
 0   Name              581 non-null    object
 1   Email             581 non-null    object
 2   Product           581 non-null    object
 3   Transaction Date  581 non-null    object
dtypes: object(4)
memory usage: 18.3+ KB
```

STEP 3👇

In [265…

```
# Creating a new column  Time from Transaction Date
orders["Time"] = pd.to_datetime(orders["Transaction Date"],errors="coerce")
#From the Time column above we need to
# Make a nHour column out of it
# We import the DATETIME library
from datetime import datetime
orders["Hour"] = pd.DatetimeIndex(orders["Time"]).hour
orders.head()
```

Out[265…

	Name	Email	Product	Transaction Date	Time	Hour
0	PERSON_1	PERSON_1@gmail.com	PRODUCT_75	01/03/2021 00:47:26	2021-01-03 00:47:26	0
1	PERSON_2	PERSON_2@tataprojects.com	PRODUCT_75	01/03/2021 02:04:07	2021-01-03 02:04:07	2
2	PERSON_3	PERSON_3@gmail.com	PRODUCT_63	01/03/2021 09:10:43	2021-01-03 09:10:43	9
3	PERSON_4	PERSON_4@gmail.com	PRODUCT_63	01/03/2021 09:49:48	2021-01-03 09:49:48	9
4	PERSON_5	PERSON_5@gmail.com	PRODUCT_34,PRODUCT_86,PRODUCT_57,PRODUCT_89	01/03/2021 10:56:46	2021-01-03 10:56:46	10

STEP 4 👇

In [262…

```
#From the Hour column,we need to identify
#The busiest Hour
busiest_time1 = orders["Hour"].value_counts().index.tolist()
busiest_time2 = orders["Hour"].value_counts().values.tolist()
```

STEP 5 👇

In [249…

```
#We to make the above data into a stack of two columns
overall_time = np.column_stack((busiest_time1,busiest_time2))
print(" Hour of day"+"\t"+"Cummulative number of purchases\n")
for row in overall_time:
    print("\t\t".join(map(str, row)))
#Lets sort the above data
time_required = orders["Hour"].value_counts().sort_index()
busiest_time1 = []
for time in range(0,23):
    busiest_time1.append(time)
busiest_time2 = time_required.sort_index()
busiest_time2.tolist()
busiest_time2 = pd.DataFrame(busiest_time2)
```

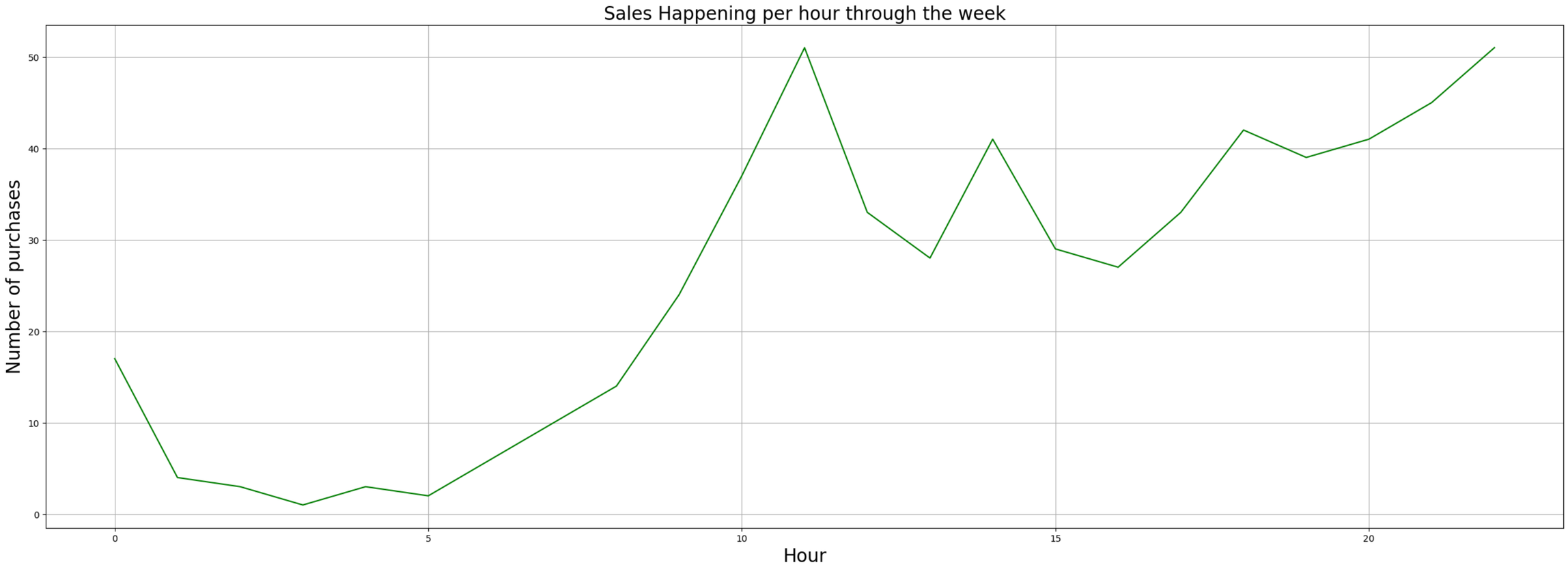
```
Hour of day	Cummulative number of purchases

23		51
12		51
22		45
19		42
21		41
15		41
20		39
11		37
13		33
18		33
16		29
14		28
17		27
10		24
0		17
9		14
8		10
7		6
1		4
2		3
5		3
6		2
3		1
```

STEP 6 👇

In [348…

```
plt.figure(figsize=(30,10))
plt.title("Sales Happening per hour through the week",fontsize =20)
plt.ylabel("Number of purchases",fontsize=20)
plt.xlabel("Hour",fontsize=20)
plt.grid()
plt.plot(busiest_time1,busiest_time2,color = "g")
plt.show()
```


Sales Happening per hour through the week
Number of purchases
Hour
0
10
20
30
40
50
0
5
10
15
20