```
from google.colab import drive
drive.mount('/content/drive')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
```

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

import math
from datetime import datetime

pd.options.display.max_columns=100

df_train = pd.read_csv('/content/drive/MyDrive/walmart-sales-forecast/train.csv')

df_train.head()
```

	Store	Dept	Date	Weekly_Sales	IsHoliday
0	1	1	2010-02-05	24924.50	False
1	1	1	2010-02-12	46039.49	True
2	1	1	2010-02-19	41595.55	False
3	1	1	2010-02-26	19403.54	False
4	1	1	2010-03-05	21827.90	False

Limpieza de datos:

- Verificar valores nulos.
- Reemplazar o eliminar los valores nulos.
- Convertir las columnas con tipos de datos incorrectos, por ejemplo, convertir fechas de texto a objetos `datetime`.

```
print("\nValores nulos en Train:")
print(df_train.isnull().sum())
```

```

Valores nulos en Train:
Store           0
Dept            0
Date            0
Weekly_Sales    0
IsHoliday       0
dtype: int64
```

```
df_train.fillna(0, inplace=True)  # Reemplazar nulos con 0
```

```
df_train["Date"] = pd.to_datetime(df_train["Date"])

print(df_train.dtypes)
```

```
Store                    int64
Dept                     int64
Date            datetime64[ns]
Weekly_Sales           float64
IsHoliday                 bool
dtype: object
```

Preparación:

- Crear nuevas variables a partir de las fechas, como día de la semana o del año.
- Filtrar el dataset para seleccionar solo ciertas categorías de productos.

```
df_train["Year"] = df_train["Date"].dt.year
df_train["Month"] = df_train["Date"].dt.month
df_train["Day"] = df_train["Date"].dt.day
df_train["DayOfWeek"] = df_train["Date"].dt.dayofweek

df_train.head()
```

	Store	Dept	Date	Weekly_Sales	IsHoliday	Year	Month	Day	DayOfWeek
0	1	1	2010-02-05	24924.50	False	2010	2	5	4
1	1	1	2010-02-12	46039.49	True	2010	2	12	4
2	1	1	2010-02-19	41595.55	False	2010	2	19	4
3	1	1	2010-02-26	19403.54	False	2010	2	26	4
4	1	1	2010-03-05	21827.90	False	2010	3	5	4

Análisis Exploratorio:

- Mostrar un resumen estadístico de las ventas.
- Visualizar las ventas a lo largo del tiempo utilizando `matplotlib` o `seaborn`.

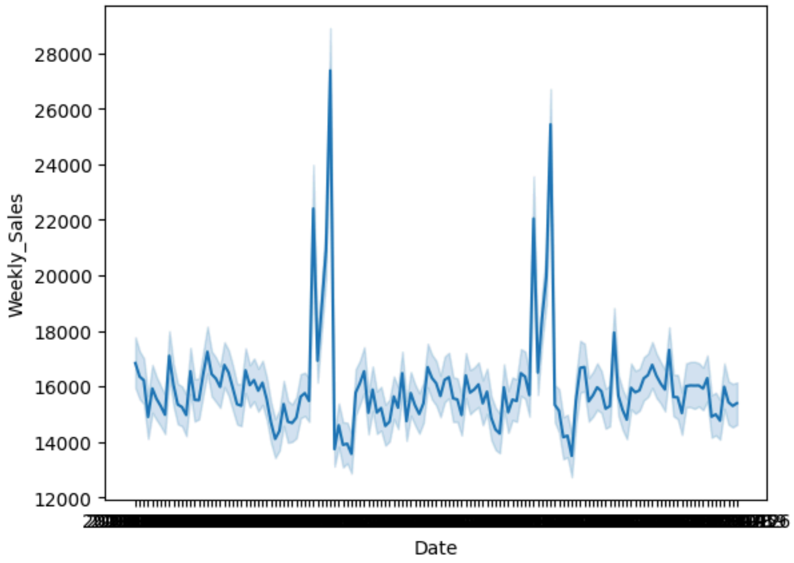
```
print(df_train.describe())
```

```
               Store           Dept                           Date  \
count  421570.000000  421570.000000                         421570
mean       22.200546      44.260317  2011-06-18 08:30:31.963375104
min         1.000000       1.000000            2010-02-05 00:00:00
25%        11.000000      18.000000            2010-10-08 00:00:00
50%        22.000000      37.000000            2011-06-17 00:00:00
75%        33.000000      74.000000            2012-02-24 00:00:00
max        45.000000      99.000000            2012-10-26 00:00:00
std        12.785297      30.492054                            NaN

        Weekly_Sales           Year          Month            Day  DayOfWeek
count  421570.000000  421570.000000  421570.000000  421570.000000   421570.0
mean    15981.258123    2010.968591       6.449510      15.673131        4.0
min     -4988.940000    2010.000000       1.000000       1.000000        4.0
25%      2079.650000    2010.000000       4.000000       8.000000        4.0
50%      7612.030000    2011.000000       6.000000      16.000000        4.0
75%     20205.852500    2012.000000       9.000000      23.000000        4.0
max    693099.360000    2012.000000      12.000000      31.000000        4.0
std     22711.183519       0.796876       3.243217       8.753549        0.0
```

Generar randomly select 5 items from a list Cerrar

```
sns.lineplot(x="Date", y="Weekly_Sales", data=df_train)
plt.show()
```


Weekly_Sales
Date