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

```
Mounted at /content/drive
```

Preprocessing Data

```
import pandas as pd
```

```
# Membaca dataset
file_path = '/content/drive/My Drive/Colab Notebooks/TugasSTKI/dataset.csv'
data = pd.read_csv(file_path)

# Menampilkan nama kolom
print(data.columns)
```

```
Index(['Unnamed: 0', 'product_href', 'product_name', 'product_type', 'brand',
       'notable_effects', 'skintype', 'price', 'description', 'picture_src',
       'labels', 'Sensitive', 'Combination', 'Oily', 'Dry', 'Normal'],
      dtype='object')
```

```
import pandas as pd

# Membaca dataset dari file CSV
file_path = '/content/drive/My Drive/Colab Notebooks/TugasSTKI/dataset.csv'
data = pd.read_csv(file_path)

# Menampilkan 5 baris pertama dari dataset
print("Menampilkan 5 baris pertama dari dataset:")
print(data.head(5))

# Menampilkan 5 baris pertama hanya untuk kolom-kolom tertentu
columns_to_display = ['Unnamed: 0', 'product_href', 'product_name', 'product_type', 'brand',
                      'notable_effects', 'skintype', 'price', 'description', 'picture_src']
print("\nMenampilkan 5 baris pertama untuk kolom-kolom yang relevan:")
print(data[columns_to_display].head(5))
```

```
Menampilkan 5 baris pertama dari dataset:
    Unnamed: 0                                       product_href  \
0            0  https://www.beautyhaul.com/product/detail/bubb...
1            1  https://www.sociolla.com/face-wash/62452-ph-ba...
2            2  https://www.sociolla.com/toner/15871-licorice-...
3            3  https://www.beautyhaul.com/product/detail/aqua...
4            4  https://www.sociolla.com/essence/38023-licoric...

                              product_name product_type    brand  \
0        ACWELL Bubble Free PH Balancing Cleanser    Face Wash  ACWELL
```

```
       1    ACWELL pH Balancing Soothing Cleansing Foam    Face Wash   ACWELL
       2  Acwell Licorice pH Balancing Cleansing Toner         Toner   ACWELL
       3            ACWELL Aquaseal Soothing Tonic             Toner   ACWELL
       4            Licorice pH Balancing Essence Mist         Toner   ACWELL

                               notable_effects  \
       0  Acne-Free, Pore-Care, Brightening, Anti-Aging
       1                            Soothing, Balancing
       2                            Soothing, Balancing
       3  Acne-Free, Pore-Care, Brightening, Anti-Aging
       4                          Brightening, Soothing

                                 skintype        price  \
       0                             Oily  Rp 209.000
       1                Normal, Dry, Combination  Rp 181.800
       2  Normal, Dry, Oily, Combination, Sensitive  Rp 149.000
       3                             Oily  Rp 290.000
       4                       Normal, Dry  Rp 194.650

                                description  \
       0  Mengangkat kotoran dan menghapus makeup dalam ...
       1  Membersihkan dan menenangkan kulit sensitif de...
       2  Mengangkat sisa kotoran, debu, dan make up sek...
       3  Pre-essence yang diformulasikan dengan ekstrak...
       4  Essens mist dengan kelembapan tinggi yang memb...

                                picture_src  labels  Sensitive  \
       0  https://www.beautyhaul.com/assets/uploads/prod...      18          0
       1  https://images.soco.id/8f08ced0-344d-41f4-a15e...     127          0
       2  https://www.soco.id/cdn-cgi/image/w=73,format=...     127          1
       3  https://www.beautyhaul.com/assets/uploads/prod...      18          0
       4  https://www.sociolla.com/cdn-cgi/image/w=425,f...      40          0

          Combination  Oily  Dry  Normal
       0            0     1    0       0
       1            1     0    1       1
       2            1     1    1       1
       3            0     1    0       0
       4            0     0    1       1

Menampilkan 5 baris pertama untuk kolom-kolom yang relevan:
       Unnamed: 0                                    product_href  \
       0            0  https://www.beautyhaul.com/product/detail/bubb...
       1            1  https://www.sociolla.com/face-wash/62452-ph-ba...
       2            2  https://www.sociolla.com/toner/15871-licorice-...
       3            3  https://www.beautyhaul.com/product/detail/aqua...
       4            4  https://www.sociolla.com/essence/38023-licoric...
```

```python
import pandas as pd

# Membaca dataset
file_path = '/content/drive/My Drive/Colab Notebooks/TugasSTKI/dataset.csv'
data = pd.read_csv(file_path)
```

```
# Mengubah nama kolom
data = data.rename(columns={
    'product_name': 'nama_produk',
    'brand': 'nama_brand',
    'description': 'deskripsi_produk',
    'skintype': 'jenis_kulit_yang_cocok',
    'notable_effects': 'masalah_kulit_yang_ditangani',
    'price': 'harga_produk',
    'product_type': 'kategori_produk',
    'product_href': 'link_pembelian'
})

# Menghapus kolom yang tidak dibutuhkan
kolom_yang_dihapus = ['Unnamed: 0', 'picture_src', 'labels']
data = data.drop(columns=kolom_yang_dihapus)

# Menyimpan dataset yang telah dibersihkan ke file baru
cleaned_file_path = '/content/drive/My Drive/Colab Notebooks/TugasSTKI/dataset_cleaned.csv'
data.to_csv(cleaned_file_path, index=False)

# Menampilkan beberapa baris pertama dari dataset yang telah dibersihkan
print(data.head())
```

```
                                        link_pembelian  \
0  https://www.beautyhaul.com/product/detail/bubb...
1  https://www.sociolla.com/face-wash/62452-ph-ba...
2  https://www.sociolla.com/toner/15871-licorice-...
3  https://www.beautyhaul.com/product/detail/aqua...
4  https://www.sociolla.com/essence/38023-licoric...

                              nama_produk kategori_produk nama_brand  \
0      ACWELL Bubble Free PH Balancing Cleanser       Face Wash     ACWELL
1    ACWELL pH Balancing Soothing Cleansing Foam       Face Wash     ACWELL
2  Acwell Licorice pH Balancing Cleansing Toner           Toner     ACWELL
3               ACWELL Aquaseal Soothing Tonic           Toner     ACWELL
4            Licorice pH Balancing Essence Mist           Toner     ACWELL

                    masalah_kulit_yang_ditangani  \
0  Acne-Free, Pore-Care, Brightening, Anti-Aging
1                            Soothing, Balancing
2                            Soothing, Balancing
3  Acne-Free, Pore-Care, Brightening, Anti-Aging
4                            Brightening, Soothing

                    jenis_kulit_yang_cocok harga_produk  \
0                                     Oily   Rp 209.000
1                  Normal, Dry, Combination   Rp 181.800
2  Normal, Dry, Oily, Combination, Sensitive   Rp 149.000
3                                     Oily   Rp 290.000
4                              Normal, Dry   Rp 194.650

                            deskripsi_produk  Sensitive  Combination  \
0  Mengangkat kotoran dan menghapus makeup dalam ...          0            0
1  Membersihkan dan menenangkan kulit sensitif de...          0            1
```

```
2  Mengangkat sisa kotoran, debu, dan make up sek...        1          1
3  Pre-essence yang diformulasikan dengan ekstrak...        0          0
4  Essens mist dengan kelembapan tinggi yang memb...        0          0

   Oily  Dry  Normal
0     1    0       0
1     0    1       1
2     1    1       1
3     1    0       0
4     0    1       1
```