

3. Lakukan klasifikasi dengan menggunakan Algoritma Association Rules dalam soal No. 3 dan hitunglah apabila:

- min\_support=0.2, min\_confidence=0.2, min\_lift=0.2, min\_lenght=2
- Berapa association rules yang dapat terbentuk dari soal 3a. tersebut?
- Lakukan export data ke dalam excel terhadap hasil tersebut dan lakukan analisisnya!

Jawaban :

a.

In [1]:

```
import numpy as np
import pandas as pd
from apyori import apriori
```

In [2]:

```
dataset = pd.read_excel('D:/UAS Data Mining/dataset_soal No. 3.xls')
```

In [3]:

```
dataset.head()
```

Out[3]:

	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item10
0	burgers	meatballs	eggs	low fat yogurt	NaN	mineral water	salmon	low fat yogurt	NaN	mineral water
1	chutney	low fat yogurt	NaN	whole wheat pasta	french fries	mineral water	salmon	whole wheat pasta	french fries	mineral water
2	turkey	whole wheat pasta	french fries	soup	light cream	shallot	NaN	soup	light cream	shallot
3	mineral water	soup	light cream	frozen vegetables	spaghetti	green tea	NaN	frozen vegetables	spaghetti	green tea
4	low fat yogurt	frozen vegetables	spaghetti	french fries	eggs	chocolate	frozen smoothie	french fries	eggs	chocolate

In [4]:

```
dataset.tail()
```

Out[4]:

	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item10
2049	burgers	eggs	french fries	fresh tuna	spaghetti	olive oil	clothes accessories	turkey	eggs	french fries
2050	burgers	eggs	frozen smoothie	french wine	eggs	french fries	energy drink	french fries	NaN	chocolate
2051	whole wheat pasta	cake	melons	champagne	pancakes	light mayo	soup	chocolate	milk	herb & pepper
2052	ground beef	tomato sauce	spaghetti	red wine	honey	hot dogs	turkey	herb & pepper	whole wheat pasta	mineral water

	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item10
2053	burgers	eggs	frozen smoothie	milk	bacon	eggs	french fries	mineral water	avocado	cookies

In [5]:

```
dataset.shape
```

Out[5]:

```
(2054, 10)
```

In [18]:

```
records = []
for i in range(0, 2054):
    records.append([str(dataset.values[i,j]) for j in range(0, 10)])
```

In [19]:

```
association_rules = apriori(records, min_support=0.2, min_confidence=0.2, min_lift=0.2, min_length=2)
association_results = list(association_rules)
```

In [21]:

```
print(len(association_results))
```

```
61
```

In [22]:

```
print(association_results[0])
```

```
RelationRecord(items=frozenset({'avocado'}), support=0.314508276533593, ordered_statistics=[OrderedStatistic(items_base=frozenset(), items_add=frozenset({'avocado'}), confidence=0.314508276533593, lift=1.0)])
```

In [25]:

```
results = []
for item in association_results:
    pair = item[0]
    items = [x for x in pair]

    value0 = str(items[0])
    value1 = str(items[0])
    value2 = str(item[1])[:6]
    value3 = str(item[2][0][2])[:6]
    value4 = str(item[2][0][3])[:6]

    rows = (value0,value1,value2,value3,value4)

    results.append(rows)
```

```

label = ['title1', 'title2', 'support', 'confidence', 'lift']

store_suggestion = pd.DataFrame.from_records(results, columns=label)

print(store_suggestion)

```

```

    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
3  clothes accessories clothes accessories  0.3398    0.3398  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
3  clothes accessories clothes accessories  0.3398    0.3398  1.0
4  cookies  cookies  0.3588    0.3588  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
3  clothes accessories clothes accessories  0.3398    0.3398  1.0
4  cookies  cookies  0.3588    0.3588  1.0
5  eggs  eggs  0.4099    0.4099  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
3  clothes accessories clothes accessories  0.3398    0.3398  1.0
4  cookies  cookies  0.3588    0.3588  1.0
5  eggs  eggs  0.4099    0.4099  1.0
6  energy drink energy drink  0.3213    0.3213  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
3  clothes accessories clothes accessories  0.3398    0.3398  1.0
4  cookies  cookies  0.3588    0.3588  1.0
5  eggs  eggs  0.4099    0.4099  1.0
6  energy drink energy drink  0.3213    0.3213  1.0
7  french fries french fries  0.6548    0.6548  1.0
    title1  title2 support confidence lift
0  avocado  avocado  0.3145    0.3145  1.0
1  burgers  burgers  0.2429    0.2429  1.0
2  chocolate chocolate  0.4756    0.4756  1.0
3  clothes accessories clothes accessories  0.3398    0.3398  1.0
4  cookies  cookies  0.3588    0.3588  1.0
5  eggs  eggs  0.4099    0.4099  1.0
6  energy drink energy drink  0.3213    0.3213  1.0

```

7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0

10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0

7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0

10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0

4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0



16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0

24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0

28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0

28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0

24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0

16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0

4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0

28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0



10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0

31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0

7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0

25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0

42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0

10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0

24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0

37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0



49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0

7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0

16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
53	eggs	eggs	0.2185	0.2185	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0

24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
53	eggs	eggs	0.2185	0.2185	1.0
54	eggs	eggs	0.2653	0.2653	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0

31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
53	eggs	eggs	0.2185	0.2185	1.0
54	eggs	eggs	0.2653	0.2653	1.0
55	energy drink	energy drink	0.2911	0.2911	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0

37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
53	eggs	eggs	0.2185	0.2185	1.0
54	eggs	eggs	0.2653	0.2653	1.0
55	energy drink	energy drink	0.2911	0.2911	1.0
56	milk	milk	0.2083	0.2083	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0

42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
53	eggs	eggs	0.2185	0.2185	1.0
54	eggs	eggs	0.2653	0.2653	1.0
55	energy drink	energy drink	0.2911	0.2911	1.0
56	milk	milk	0.2083	0.2083	1.0
57	mineral water	mineral water	0.2249	0.2249	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0

46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0
49	clothes accessories	clothes accessories	0.2064	0.2064	1.0
50	clothes accessories	clothes accessories	0.3154	0.3154	1.0
51	clothes accessories	clothes accessories	0.2020	0.2020	1.0
52	french fries	french fries	0.2215	0.2215	1.0
53	eggs	eggs	0.2185	0.2185	1.0
54	eggs	eggs	0.2653	0.2653	1.0
55	energy drink	energy drink	0.2911	0.2911	1.0
56	milk	milk	0.2083	0.2083	1.0
57	mineral water	mineral water	0.2249	0.2249	1.0
58	turkey	turkey	0.2224	0.2224	1.0
	title1	title2	support	confidence	lift
0	avocado	avocado	0.3145	0.3145	1.0
1	burgers	burgers	0.2429	0.2429	1.0
2	chocolate	chocolate	0.4756	0.4756	1.0
3	clothes accessories	clothes accessories	0.3398	0.3398	1.0
4	cookies	cookies	0.3588	0.3588	1.0
5	eggs	eggs	0.4099	0.4099	1.0
6	energy drink	energy drink	0.3213	0.3213	1.0
7	french fries	french fries	0.6548	0.6548	1.0
8	herb & pepper	herb & pepper	0.3042	0.3042	1.0
9	milk	milk	0.4079	0.4079	1.0
10	mineral water	mineral water	0.4527	0.4527	1.0
11	nan	nan	0.6285	0.6285	1.0
12	shrimp	shrimp	0.2151	0.2151	1.0
13	turkey	turkey	0.5272	0.5272	1.0
14	whole wheat pasta	whole wheat pasta	0.2653	0.2653	1.0
15	avocado	avocado	0.2030	0.2030	1.0
16	mineral water	mineral water	0.3037	0.3037	1.0
17	avocado	avocado	0.2921	0.2921	1.0
18	chocolate	chocolate	0.2521	0.2521	1.0
19	chocolate	chocolate	0.3042	0.3042	1.0
20	chocolate	chocolate	0.2711	0.2711	1.0
21	chocolate	chocolate	0.3763	0.3763	1.0
22	clothes accessories	clothes accessories	0.2512	0.2512	1.0
23	clothes accessories	clothes accessories	0.3237	0.3237	1.0
24	clothes accessories	clothes accessories	0.2108	0.2108	1.0
25	clothes accessories	clothes accessories	0.3281	0.3281	1.0
26	french fries	french fries	0.3213	0.3213	1.0
27	mineral water	mineral water	0.2005	0.2005	1.0
28	nan	nan	0.2429	0.2429	1.0
29	eggs	eggs	0.3617	0.3617	1.0
30	eggs	eggs	0.2059	0.2059	1.0
31	eggs	eggs	0.2409	0.2409	1.0
32	eggs	eggs	0.2848	0.2848	1.0
33	energy drink	energy drink	0.3033	0.3033	1.0
34	energy drink	energy drink	0.3033	0.3033	1.0
35	milk	milk	0.2804	0.2804	1.0
36	mineral water	mineral water	0.2702	0.2702	1.0
37	french fries	french fries	0.4819	0.4819	1.0
38	french fries	french fries	0.3709	0.3709	1.0
39	whole wheat pasta	whole wheat pasta	0.2478	0.2478	1.0
40	milk	milk	0.2702	0.2702	1.0
41	mineral water	mineral water	0.3476	0.3476	1.0
42	nan	nan	0.2502	0.2502	1.0
43	mineral water	mineral water	0.2891	0.2891	1.0
44	chocolate	chocolate	0.2429	0.2429	1.0
45	chocolate	chocolate	0.2453	0.2453	1.0
46	chocolate	chocolate	0.2833	0.2833	1.0
47	clothes accessories	clothes accessories	0.2429	0.2429	1.0
48	clothes accessories	clothes accessories	0.2497	0.2497	1.0



```

49 clothes accessories clothes accessories 0.2064 0.2064 1.0
50 clothes accessories clothes accessories 0.3154 0.3154 1.0
51 clothes accessories clothes accessories 0.2020 0.2020 1.0
52 french fries french fries 0.2215 0.2215 1.0
53 eggs eggs 0.2185 0.2185 1.0
54 eggs eggs 0.2653 0.2653 1.0
55 energy drink energy drink 0.2911 0.2911 1.0
56 milk milk 0.2083 0.2083 1.0
57 mineral water mineral water 0.2249 0.2249 1.0
58 turkey turkey 0.2224 0.2224 1.0
59 chocolate chocolate 0.2366 0.2366 1.0
title1 title2 support confidence lift
0 avocado avocado 0.3145 0.3145 1.0
1 burgers burgers 0.2429 0.2429 1.0
2 chocolate chocolate 0.4756 0.4756 1.0
3 clothes accessories clothes accessories 0.3398 0.3398 1.0
4 cookies cookies 0.3588 0.3588 1.0
...
56 milk milk 0.2083 0.2083 1.0
57 mineral water mineral water 0.2249 0.2249 1.0
58 turkey turkey 0.2224 0.2224 1.0
59 chocolate chocolate 0.2366 0.2366 1.0
60 clothes accessories clothes accessories 0.2419 0.2419 1.0

```

[61 rows x 5 columns]

In [26]:

```
store_suggestion.describe()
```

Out[26]:

	title1	title2	support	confidence	lift
count	61	61	61	61	61
unique	15	15	53	53	1
top	clothes accessories	clothes accessories	0.2429	0.2429	1.0
freq	11	11	4	4	61

In [27]:

```
store_suggestion.to_excel('C:/Users/RK/Downloads/jawaban UAS data mining/output_data set no. 3.xls')
```

- Association rules yang terbentuk dari soal nomor 3a yaitu dengan jumlah 61 Association rules
- Setelah dianalisa jumlah data pada output dari soal nomor 3a lebih sedikit dari dataset semula. Jumlah data outputnya menjadi 61 Rows dan 5 columns