Project. Phase 3
Most Recent Items Listed

This document explains how to get the data for phase 3 of the project, how to save it in a table and how to present it in reports for visualization.

In phase 3, ***the final goal is to get two reports with the new items posted online*** on my competitor's web page.

I. Objetive.

1. Create a new script that calculates and adds new records to table

   `tbl_etsy_shops_new_items_posted`

2. Create a report to visualize comparison between Column A and Column B.

3. Create a report with all new items grouped by shop, counting how many times that item was posted online as new or re-posted, and in descending sorted.

II. What is this project about?

This project is about finding the new items posted online on my competitor's shop web page.

III. Introduction.

In order to obtain the items recently posted in my competitor's shop web page, we need to compare both columns, column A and column B (***fig. 1***). To achieve this accurately we need to follow a series of steps that I'm going to describe in this documentation.

IV. What we know?

The following is a description step by step of the process of what happen in the competitor shop web page:

1. ***First set of items.***

   The competitor posts 14 new items in their shop web page. The number 14 is variable, but we are going to use it during the documentation as an example.

2. ***Sort listing.***

   In the shop web page, we sort the 14 new items list as **"Most Recent"**, because it's the best sorting that help our purpose. Sorting as Most Recent is the easiest way to identify the new items posted or re-posted in the competitor shop web page.

3. ***First fetching. Column A.***

   We fetch the 14 new items; we call it **"column A"**.

   So, at this point we know the 14 items posted originally in the competitors shop web page.

4. ***Second set of items.***

   After the 1st fetching the competitor will post a new set of items in their shop web page. This second set of items will be a combination of:

   - new items
   - re-post items from the first list of items; and,
   - items with no activity from the first list of items.

5. ***Post new items.***

   Then, the competitor posts some new items in the shop web page and the web page remove the same number of items from the original list mentioned in point (1).

   We don't know how many new items were posted and we don't know how many items were removed from the original list.

6. ***Re-post items.***

   The competitor re-posts some items from the original list described in point (1). Basically, moving their position from the original position to a new most recent position. Since the activity is only movement from one position to another, there is no change in the number of elements in the new list that is being created.

7. ***Second fetching. Column B.***

At this point the second items list has been created in the competitor shop web page. This new list will be called **"column B"**, and as we mentioned earlier, is a combination of new items, re-posted items, and items with no activity from column A.

8. ***We don't know.***

Even though we have all the elements of the column B, we don't know what elements are new, what elements are re-posted and what elements had no activity, and that is this project about.

9. ***Position***

We also use as reference the position of the item in the listing of my competitor shop web page.

1st set of 14 items **Column A**

Position	Item Id
1	1706176626
2	1699330121
3	1662443179
4	1685057375
5	1657703659
6	1703165843
7	1699331579
8	1675246073
9	1685153132
10	1706100794
11	1650826992
12	1706100532
13	1665002211
14	1685154880

2nd set of 14 items **Column B**

Position	Item Id
1	1703165843
2	1644384972
3	1706100532
4	1688975826
5	1706176626
6	1699330121
7	1662443179
8	1685057375
9	1657703659
10	1699331579
11	1675246073
12	1685153132
13	1706100794
14	1650826992

Fig. 1. ***First and second set of item ids posted by my competitor in their shop web page.***

V. What we need to find out?

This project is about finding all the elements that are in column B as new elements whether they are like:

- new items
- re-posted items from the first list of items; and,
- items with no activity from the first list of items.

VI. How to find out our goal?

The following list is a detail about what we need to perform in order to obtain the answer for each element of column B. I'm going to perform manually what the script must perform. The following explanation tries to describe step by step with charts for better understanding.

1. ***Alias each element.***

   We will add an alias to each element for explanation and visualization purposes.

   The alias in section B is a question mark because that is exactly what is this project about, I mean, to find out if the items in the section B are new, re-posted or with no activity (***fig. 2***).

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
13	1665002211	A13
14	1685154880	A14

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	1644384972	?
3	1706100532	?
4	1688975826	?
5	1706176626	?
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	1706100794	?
14	1650826992	?

Fig. 2. ***Alias each element in section A.***

2. ***Subtraction.***

Perform a subtraction with the section B as a minuend and the section A as a subtrahend.

This will give us only the items that are in the section B but are not in the section A. The difference of the subtraction are the new items added to the column A to generate the new column B, therefore the difference is part of the items recently posted.

The subtraction does not work for re-posted items because those items were in the section A as well as they are in the section B.

We need to keep the result saved because it is part of the objective and it will be added to a table later.

For instance, when I check manually what items are in section B but are not in section A, I find that the elements 2 and 4 in the section B are not in the section A list. These 2 elements will have as aliases B1 and B2, respectively, as you can see in the chart as follows (***fig. 3***). 12 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
13	1665002211	A13
14	1685154880	A14

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	**1644384972**	**B1**
3	1706100532	?
4	**1688975826**	**B2**
5	1706176626	?
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	1706100794	?
14	1650826992	?

Fig. 3. ***Section B minus Section A subtraction answer.***

3. No activity elements.

The next step is to find the elements with no activity. When we start searching for these elements, we will find the discarded elements by not find them in column B, and the re-posted

elements as well, because we will find them but in a different position than in the previous column A, actually within to the first positions.

4. ***Finding position of 1st and last elements of Column A.***

First, we found the position for the 1st and last elements of previous fetching list, in this case it is as follows (***see fig. 4***):

1st fetching of
14 items
Section A

Element	Position	Item Id	Alias
1st element	Position 1	1706176626	A1
Last element	Position 14	1685154880	A14

Fig. 4. Finding position of 1st and last element in Column A.

5. ***Searching 1st element (A1) from Column A in Column B.***

Now, we search manually the 1st element, item 1706176626, from column A in column B.

Done! We find it in the position 5 of the column B, so, since this element is the same as the original in column A, we will use the same alias A1 (***fig. 5***). 11 unknown items to go.

1st fetching of
14 items
Section A

2nd fetching of
14 items
Section B

Element	Position	Item Id	Alias		Position	Item Id	Alias
1st element	Position **1**	1706176626	**A1**		Position **5**	1706176626	**A1**

Fig. 5. Finding 1st element (A1) of Column A in Column B

The full chart now looks as follows (***fig. 6***):

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	**1706176626**	**A1**
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
13	1665002211	A13
14	1685154880	A14

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	1706100532	?
4	1688975826	B2
5	**1706176626**	**A1**
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	1706100794	?
14	1650826992	?

Fig. 6. Finding 1st element (A1) from Column A in Column B. Found in position 5 in column B.

6. *Searching the last element (A14) from Column A in Column B.*

Then, after completing the 1st element we focus in searching the last element of the previous fetching (*fig. 7, fig. 8*)

1st fetching of 14 items
Section A

2nd fetching of 14 items
Section B

Element	Position	Item Id	Alias	Position	Item Id	Alias
Last element	Position **14**	1685154880	**A14**	n/a	**Not found**	n/a

Fig. 7. Finding last element (A14) from Column A in Column B.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
13	1665002211	A13
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	1706100532	?
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	1706100794	?
14	1650826992	?

Fig. 8. Finding the last element (A14) from Column A in Column B. Not Found! That means this element was discarded.

If we don't find the A14 from the column A in column B, that means that element has been discarded. In that case we search the second to last.

7. Searching second to last (A13) from Column A in Column B.

So, we start the search manually and we don't find the A13 element from the column A in column B, that means the A13 element was also discarded (***fig. 9, fig. 10***).

Again, this time we don't find A13 element from column A in column B, that also means that element has been discarded. In that case we search the third to last element (A12).

8. Searching third to last (A12) from Column A in Column B.

Now, we search manually for third to last element, item 1706100532, from the column A in column B. We find it in the position 3 of column B, so, since this element is the same as the original in column A, we will use the same alias A12 (***fig. 11, fig. 12***). 10 unknown items to go.

Element	1st fetching of 14 items **Section A** Position	Item Id	Alias	2nd fetching of 14 items **Section B** Position	Item Id	Alias
Last element	Position 14	1685154880	A14	n/a	Not found	n/a
2nd to last element	**Position 13**	**1665002211**	**A13**	**n/a**	**Not found**	**n/a**

Fig. 9. Finding second last element (A13) from Column A in Column B.

1st fetching of 14 items **Section A** Position	Item Id	Alias	2nd fetching of 14 items **Section B** Position	Item Id	Alias
1	1706176626	A1	1	1703165843	?
2	1699330121	A2	2	1644384972	B1
3	1662443179	A3	3	1706100532	?
4	1685057375	A4	4	1688975826	B2
5	1657703659	A5	5	1706176626	A1
6	1703165843	A6	6	1699330121	?
7	1699331579	A7	7	1662443179	?
8	1675246073	A8	8	1685057375	?
9	1685153132	A9	9	1657703659	?
10	1706100794	A10	10	1699331579	?
11	1650826992	A11	11	1675246073	?
12	1706100532	A12	12	1685153132	?
~~13~~	~~**1665002211**~~	~~**A13**~~	13	1706100794	?
~~14~~	~~1685154880~~	~~A14~~	14	1650826992	?

Fig. 10. Finding the second to last element (A13) from Column A in Column B. Not Found! That means this element was discarded.

1st fetching of 14 items
Section A

Element	Position	Item Id	Alias
Last element	Position 14	1685154880	A14
2nd to last element	Position 13	1665002211	A13
3rd to last element	**Position 12**	**1706100532**	**A12**

2nd fetching of 14 items
Section B

Position	Item Id	Alias
n/a	Not found	n/a
n/a	Not found	n/a
Position 3	**1706100532**	**A12**

Fig. 11. Finding third to last element (A12) from Column A in Column B.

1st fetching of 14 items
Previous Fetching

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	**1706100532**	**A12**
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Current Fetching

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	**1706100532**	**A12**
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	1706100794	?
14	1650826992	?

Fig. 12. Finding the third to last element (A12) from Column A in Column B. Found! In position 3 of Column B.

9. Searching fourth to last (A11) from Column A in Column B.

After finding A12 to continue the manually search, now we have to find A11 element from column A in Column B.

Element	1st fetching of 14 items **Section A** Position	Item Id	Alias	2nd fetching of 14 items **Section B** Position	Item Id	Alias
Last element	Position 14	1685154880	A14	n/a	Not found	n/a
2nd to last element	Position 13	1665002211	A13	n/a	Nof found	n/a
3rd to last element	Position 12	1706100532	A12	Position 3	1706100532	A12
4th to last element	**Position 11**	**1650826992**	**A11**	**Position 14**	**1650826992**	**A11**

Fig. 13. Finding fourth to last element (A11) from Column A in Column B.

1st fetching of 14 items **Section A**

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	**1650826992**	**A11**
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items **Section B**

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	1706100794	?
14	**1650826992**	**A11**

Fig. 14. Finding the fourth to last element (A11) from Column A in Column B. Found! In position 14 of Column B.

Found! We found the fourth to last element, item 1650826992, from column A in column B. We found it in the position 14 of column B. Since this element is the same as the original in column A, we will use the same alias A11 (***fig. 13, fig. 14***). 9 unknown items to go.

10. Searching 10th element from Column A in Column B.

At this point we already have the 1st and last element positions in column B. Now we need to find all the rest of element from column A in column B. We will proceed with charts one by one.

Continuing, we search manually for the 10th element, item 1706100794, from column A in column B.

Found! We found it in the position 13 of section B; since is the same element as the original in section A, we will use the same alias A10 (***fig. 15***). 8 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	**1706100794**	**A10**
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	1675246073	?
12	1685153132	?
13	**1706100794**	**A10**
14	1650826992	A11

Fig. 15. Finding the 10th element (A10) from Column A in Column B. Found! In position 13 of Column B.

11. Searching 9th element from Column A in Column B.

Continuing, we search manually for the 9th element, item 1685153132, from section A in section B.

Found! We found it in the position 12 of section B; since is the same element as the original in section A, we will use the same alias A9 (***fig. 16***). 7 unknown items to go.

1st fetching of 14 items **Previous Fetching**			2nd fetching of 14 items **Current Fetching**		
Position	Item Id	Alias	Position	Item Id	Alias
1	1706176626	A1	1	1703165843	?
2	1699330121	A2	2	1644384972	B1
3	1662443179	A3	3	1706100532	A12
4	1685057375	A4	4	1688975826	B2
5	1657703659	A5	5	1706176626	A1
6	1703165843	A6	6	1699330121	?
7	1699331579	A7	7	1662443179	?
8	1675246073	A8	8	1685057375	?
9	**1685153132**	**A9**	9	1657703659	?
10	1706100794	A10	10	1699331579	?
11	1650826992	A11	11	1675246073	?
12	1706100532	A12	**12**	**1685153132**	**A9**
13	~~1665002211~~	~~A13~~	13	1706100794	A10
14	~~1685154880~~	~~A14~~	14	1650826992	A11

Fig. 16. Finding the 9th element (A9) from Column A in Column B. Found! In position 12 of Column B.

12. Searching 8th element from Column A in Column B.

Continuing, we search manually for the 8th element, item 1675246073, from section A in section B.

Found! We found it in the position 11 of section B; since is the same element as the original in section A, we will use the same alias A8 (***fig. 17***). 6 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	**1675246073**	**A8**
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	?
11	**1675246073**	**A8**
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 17. Finding the 8th element (A8) from Column A in Column B.
Found! In position 11 of Column B.

13. Searching 7th element from Column A in Column B.

Continuing, we search manually for the 7th element, item 1699331579, from section A in section B.

Found! We found it in the position 10 of section B; since is the same element as the original in section A, we will use the same alias A7 (***fig. 18***). 5 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	**1699331579**	**A7**
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	?
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	**1699331579**	**A7**
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 18. Finding the 7th element (A7) from Column A in Column B.
Found! In position 10 of Column B.

14. Searching 6th element from Column A in Column B.

Continuing, we search manually for the 6th element, item 1703165843, from section A in section B. We find it in the position 1 of section B; since is the same element as the original in section A, we will use the same alias A6 (***fig. 19***). 4 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	**1703165843**	**A6**
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	**1703165843**	**A6**
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	1657703659	?
10	1699331579	A7
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 19. Finding the 6th element (A6) from Column A in Column B.
Found! In position 1 of Column B.

15. Searching 5th element from Column A in Column B.

Continuing, we search manually for the 5th element, item 1657703659, from section A in section B.

Found! We found it in the position 9 of section B; since is the same element as the original in section A, we will use the same alias A5 (***fig. 20***). 3 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	**1657703659**	**A5**
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
13	~~1665002211~~	~~A13~~
14	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	A6
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	1685057375	?
9	**1657703659**	**A5**
10	1699331579	A7
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 20. Finding the 5th element (A5) from Column A in Column B.
Found! In position 9 of Column B.

16. Searching 4th element from Column A in Column B.

Continuing, we search manually for the 4th element, item 1685057375, from section A in section B.

Found! We found it in the position 8 of section B; since is the same element as the original in section A, we will use the same alias A4. 2 unknown items to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	**1685057375**	**A4**
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	A6
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	1662443179	?
8	**1685057375**	**A4**
9	1657703659	A5
10	1699331579	A7
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 21. Finding the 4th element (A4) from Column A in Column B.
Found! In position 8 of Column B.

17. Searching 3rd element from Column A in Column B.

Continuing, we search manually for the 3rd element, item 1662443179, from section A in section B.

Found! We found it in the position 7 of section B; since is the same element as the original in section A, we will use the same alias A3 (***fig. 22***). At this point we found 13 out of 14 elements. 1 unknown item to go.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	**1662443179**	**A3**
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	A6
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	?
7	**1662443179**	**A3**
8	1685057375	A4
9	1657703659	A5
10	1699331579	A7
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 22. Finding the 3rd element (A3) from Column A in Column B.
Found! In position 7 of Column B.

18. Searching 2nd element from Column A in Column B.

Continuing, we search manually for the 2rd element, item 1699330121, from section A in section B.

Found! We found it in the position 6 of section B; since is the same element as the original in section A, we will use the same alias A2 (***fig. 23***). At this point we found 14 out of 14.

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	**1699330121**	**A2**
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	A6
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	**1699330121**	**A2**
7	1662443179	A3
8	1685057375	A4
9	1657703659	A5
10	1699331579	A7
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 23. Finding the 2nd element (A2) from Column A in Column B.
Found! In position 6 of Column B.

19. Found the destination of the 14 elements in Column A.

Finally, we had found all the elements from section A that matches in section B, so, our last chart looks like this (***fig. 24***):

1st fetching of 14 items
Section A

Position	Item Id	Alias
1	1706176626	A1
2	1699330121	A2
3	1662443179	A3
4	1685057375	A4
5	1657703659	A5
6	1703165843	A6
7	1699331579	A7
8	1675246073	A8
9	1685153132	A9
10	1706100794	A10
11	1650826992	A11
12	1706100532	A12
~~13~~	~~1665002211~~	~~A13~~
~~14~~	~~1685154880~~	~~A14~~

2nd fetching of 14 items
Section B

Position	Item Id	Alias
1	1703165843	A6
2	1644384972	B1
3	1706100532	A12
4	1688975826	B2
5	1706176626	A1
6	1699330121	A2
7	1662443179	A3
8	1685057375	A4
9	1657703659	A5
10	1699331579	A7
11	1675246073	A8
12	1685153132	A9
13	1706100794	A10
14	1650826992	A11

Fig. 24. Found the destination of the 14 elements in Column A.

VII. Next step is to find the block of items with 'no activity'.

First, we search for the 1st element of section A that is in section B, in our case it's the item A1. Once we found it in column B, that is in position 5, we need to check out the next element. If the next element is A2 or A3 then A1 is the beginning of the block. If the next element is different than A2 or A3, then that means that the item A1 was re-posted.

If the item A1 was re-posted, then, we search the 2nd element from section A in section B, in this case it is A2. Once we found it in column B, we need to check out the next element. If the next element is A3 or A4, then A2 is the beginning of the block, however, if the next elements is different than A2 or A3

We continue that pattern until find the beginning of the 'no activity' block.

Once we find the beginning of the 'no activity' block we keep matching the next elements in column B with column A until we find the last element found in the step-in ***fig. 12***.

VIII. Putting all together

At this point we have:

1. All items of section A and all items in section B with their respective aliases (page 4, step 1, ***fig. 2***).

2. Found position of 1st element from column A in column B (page 6, step 5, ***fig. 5***, ***fig. 6***).

3. Found position of last element available from column A in column B (page 8, step 8, ***fig. 11***, ***fig. 12***).

4. Found position of all other elements from column A in column B (from page 10, step 9 to page 21 step 19).

5. How to find block of 'no activity' items using the position of 1st and last elements (sub-title VII in page 21).

IX. Lastly, we found our goal.

In order for us to found our goal, we needed to find the 'no activity' block first.

Then, all the items that are not in the 'activity block' are the elements we were looking for and needed to add to the table:

```
tbl_etsy_shops_new_items_posted
```

Step 6 of 7. Create a report for manual comparison of programmer script output.

Step 7 of 7. Create a report that shows the new items posted in my competitor's shop web page.