Hey Oleksander,

Here is your challenge! Thanks again for your participation.

You'll find a detailed description of the task below.

Please remember to send back your solution **until 13:10**.

You should receive feedback to your solution within the next 5 working days.

We wish you great success!

Best regards

CHECK24 Recruiting (Insurances)

**Offline Task for Data Analysts - Funnel Analysis**

**Goal**

The goal is to perform funnel analysis (<https://en.wikipedia.org/wiki/Funnel_analysis>) for an e-commerce website. Typically, websites have a clear path to conversion: for instance, you land on the home page, then you search, select a product, and buy it. At each of these steps, some users will drop off and leave the site. The sequence of pages that lead to conversion is called 'funnel'.

Funnel analysis allows to understand where/when our users abandon the website. It gives crucial insights on user behavior and on ways to improve the user experience. Also, it often allows to discover bugs.

**Challenge Description**

You are looking at data from an e-commerce website. The site is very simple and has just 4 pages:

1. The first page is the home page. When you come to the site for the first time, you can only land on the home page as a first page.
2. From the home page, the user can perform a search and land on the search page.
3. From the search page, if the user clicks on a product, she will get to the payment page, where she is asked to provide payment information in order to buy that product.
4. If she does decide to buy, she ends up on the confirmation page

The company CEO isn't very happy with the volume of sales and, especially, of sales coming from new users. Therefore, she asked you to investigate whether there is something wrong in the conversion funnel or, in general, if you could suggest how conversion rate can be improved.

**Your task is to uncover the following**:

* A full picture of funnel conversion rate for both desktop and mobile
* Insights on what the product team should focus on in order to improve conversion rate as well as anything you might discover that could help increase sales.

**Requirements**

Please analyze the data using either Python, R or Excel (unless you have already agreed on another language/ tool with the interviewer). You have three hours to work on the task. After three hours please send your solution per email. Your solution should ideally include a report or presentation detailing your findings as well as any kind of source code you used.

**Data**

There are 5 tables downloadable here: <https://drive.google.com/drive/folders/0B3ZqJXTBGPp1Y3hLSHN5WDU5QWM?usp=sharing> All the tables refer to only the user first experience on the site. The tables are:

1. “user\_table” - information about the user. The columns are:
2. user\_id: the Id of the user. It is unique by user and can be joined to user id in all other tables
3. date: the date when the user first landed on the site
4. device: user device. Can be mobile or desktop
5. sex: male/female
6. “home\_page\_table” – users who landed on the home page. The columns are:
7. user\_id: the Id of the user. It is unique by user and can be joined to user\_id in all other tables
8. page: it is always home\_page
9. “search\_page\_table” – users who landed on the search page. The columns are:
10. user\_id: the Id of the user. It is unique by user and can be joined to user\_id in all other tables
11. page: it is always search\_page
12. “payment\_page\_table” – users who landed on the payment page. The columns are:
13. user\_id: the Id of the user. It is unique by user and can be joined to user\_id in all other tables
14. page: it is always payment\_page
15. “payment\_confirmation\_table” – users who landed on the confirmation page. These are the users who bought the product. The columns are:
16. user\_id: the Id of the user. It is unique by user and can be joined to user\_id in all other tables
17. page: it is always payment\_confirmation\_page