The Tasks for Data Analyst Intership by Rambler Group

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Description

The tasks in the following document were represented by Rambler Group to the role "the Data Analyst Internship".

Problem 1

Rambler Group's advertising campaign uses most fascinating and most memorable banners. Analytics have access to the databases containing data regard the banner' showing. The **Shows_table** contains:

- *show_id* - an identifier of a showing
- *day* - a day of a showig

show_id	day
12367	2018-10-04
28736	2019-02-22
19862	2019-01-31

The **Click_table** contains:

- *click_id* - a show identifier clicked by an user
- *bounce* - an user dismissing from an advertising after click (0 - when an user relinked to the site he keened in the information on the site. 1 - an user immediatly left the site.)

click_id	bounce
12367	1
15627	0
28735	0

You need to get all users who clicked at a banner in February 2020, and they din't reject an advertising.

Problem 2

The friendly Rambler Group's community likes to play in the table football: At the odd days they play before lunch, at the even days the play after lunch. They are splitting at the N teams among each other, and every team plays with each another team. Because of the splitting onto the teams is randomly, the product of the games is random. Also I would note that there are no ties. Only win or lose.

1. Estimate the probability if one of the teams will finish the tournament without defeat.

2. How many times do you need to hold a tournament, so that with a probability of 98% at least once this happened?