# Lab 2: Process Outgoing Calls

We want to write an ETL script that reads outgoing calls from CSV file, performs some transformations and then finally write the output to a new CSV file.

Input file:

| timestamp | a_number | b_number | duration_seconds |
|---|---|---|---|
| 2023-02-25T00:01:23Z | 2010183140 | 12546685 | 195 |
| 2023-02-25T05:12:46Z | 10577943 | 12205465 | 122 |
| 2023-02-25T06:08:28Z | 2010887534 | 15548752 | 77 |
| 2023-02-25T08:14:08Z | 10844751 | 10228549 | 314 |
| 2023-02-25T09:22:55Z | 10554562 | 10014758 | 1001 |
| 2023-02-25T10:33:09Z | 2010238744 | 11365245 | 210 |
| 2023-02-25T12:49:40Z | 2010924511 | 11654498 | 238 |
| 2023-02-25T15:13:00Z | 10322587 | 11305428 | 455 |
| 2023-02-25T18:34:07Z | 10334695 | 12554682 | 2631 |
| 2023-02-25T18:44:05Z | 10554892 | 10478849 | 720 |
| 2023-02-25T18:56:30Z | 10542654 | 15042139 | 1710 |
| 2023-02-25T22:19:08Z | 2010735641 | 11852461 | 320 |
| 2023-02-25T23:13:25Z | 10021465 | 12468752 | 189 |
| 2023-02-25T23:51:13Z | 10326541 | 10548482 | 318 |
| 2023-03-03T15:09:22Z | 10548225 | 11744685 | 20 |

a_number: The number initiating the call

b_number: The number receiving the call

1. If the b_number starts with 10 then it's an OnnetCall (both numbers are on the same network), otherwise it's an OffnetCall (numbers are on different networks, sometimes called CrossnetCall)
2. Transformations needed:
    1. Extract date from timestamp.
    2. Normalize a_number.
    3. Add new column (fare), calculated as follows:
       If it's an OnnetCall, multiply number of minutes by the rate (0.14)
       If it's an OffnetCall the rate will differ for each operator:
         - a_numbers starting with 15 -> rate = 0.16
         - starting with 12 -> rate = 0.15
         - Else -> rate = 0.17
3. Final step is to write the result to a CSV file.