

## Telco Data Check & Analyze

---

- Write a C++ program to perform some queries on a telco data (coming from stdin) with the following format:
- The first block of data consists of lines (terminated by a line containing #), each line (number of lines can be up to 100000) is under the form:
  - call <from\_number> <to\_number> <date> <from\_time> <end\_time>
  - which is a call from the phone number <from\_number> to a phone number <to\_number> on <date>, and starting at time-point <from\_time>, terminating at time-point <end\_time>
  - <from\_number> and <to\_number> are string of 10 characters (a phone number is correct if it contains only digits 0,1,...,9, otherwise, the phone number is incorrect)
  - <date> is under the form YYYY-MM-DD (for example 2022-10-21)
  - <from\_time> and <to\_time> are under the form hh:mm:ss (for example, 10:07:23)
- The second block consists of queries (terminated by a line containing #), each query in a line (number of lines can be up to 100000) and belongs to one of the following types:
  - ?check\_phone\_number: print to stdout (in a new line) value 1 if no phone number is incorrect
  - ?number\_calls\_from <phone\_number>: print to stdout (in a new line) the number of times a call is made from <phone\_number>
  - ?number\_total\_calls: print to stdout (in a new line) the total number of calls of the data
  - ?count\_time\_calls\_from <phone\_number>: print to stdout (in a new line) the total time duration (in seconds) the calls are made from <phone\_number>

# Telco Data Check & Analyze

- Example

stdin	stdout
call 0912345678 0132465789 2022-07-12 10:30:23 10:32:00	1 2
call 0912345678 0945324545 2022-07-13 11:30:10 11:35:11	4 398
call 0132465789 0945324545 2022-07-13 11:30:23 11:32:23	120
call 0945324545 0912345678 2022-07-13 07:30:23 07:48:30	
# ?check_phone_number ?number_calls_from 0912345678 ?number_total_calls ?count_time_calls_from 0912345678 ?count_time_calls_from 0132465789 #	