



# ASSESSMENT TEST: APPLY INCREMENT

## INTRODUCTION

The Technical Assessment at Data Insights GmbH serves the purpose to receive an objective view of the technical knowledge of our applicants.

For the solution, you can use any programming/scripting language and this test is not about knowing syntax perfectly, it is about how you approach problems and your thought process.

Time Limit: **60 minutes**

## TASK DEFINITION

We need to establish incremental data change replication from a source to a target system.

### GIVEN:

- Two datasets "Customers (Current)" and "Customers (Updates)"
- "Customers (Current)" is a list of customers in the target system (Primary Key: CUSTOMER\_ID)
- "Customers (Updates)" is a list of updated customer records from the source system (Primary Key: CUSTOMER\_ID, UPDATE\_DATE)

### TASK:

Write a program (any programming language or pseudo-code) to update "Customers (Current)" with the data from "Customers (Updates)" resulting in the most recent (by UPDATE\_DATE) values per customer (CUSTOMER\_ID).

### ADDITIONAL NOTES:

The attribute UPDATE\_FLAG of "Customers (Updates)" dataset has following values and control logic meaning:

- 'I' record has been inserted (new) in the source system
- 'U' record has been updated (changed) in the source system
- 'D' record has been deleted in the source system



The following tables you will find in .txt format in the attachment of the email.

Sample:

"Customers (Current)"

CUSTOMER_ID	UPDATE_DATE	LOCATION
101	01.01.2000	Berlin
102	02.01.2000	London
103	03.01.2000	Moscow
104	04.01.2000	Paris

"Customers (Updates)"

CUSTOMER_ID	UPDATE_DATE	LOCATION	UPDATE_FLAG
102	04.02.2018	Kiev	U
102	05.02.2018	Istanbul	U
103	05.02.2018		D
104	31.12.1999	Prague	U
105	05.02.2018	Vienna	I

"Customers (Current)" - Result

CUSTOMER_ID	UPDATE_DATE	LOCATION
101	01.01.2000	Berlin
102	05.02.2018	Istanbul
104	04.01.2000	Paris
105	05.02.2018	Vienna