# Assignment

Return your answer as a zip file containing all relevant files.

The assignment consist of two parts:

- Provide some \_player session insights\_ from the dataset provided using jupyter and spark. You can use any external libraries you see fit.

- Design and implement a \_player session service\_ using data processing framework of your preference (spark, map-reduce, sql, etc.) and database of your choice (e.g. Cassandra). You are free to use any external libraries you see fit.

## Player Session Insights

Your task is to provide insights on the session events dataset.

### Requirements

\* Use language of your choice. (Scala, Pyspark, Sql, etc.)

\* How many sessions are in the dataset?

\* How many sessions are completed per country?

\* How many sessions are completed per player?

\* What is the country with more sessions started during 2018?

\* Plot the player sessions completed per country

## Player Session Service

Your task is to design and implement a `player session service` which consumes events and provides metrics about players sessions. Each user will generate two events, one `start` event when the session starts and one `end` event when session is finished. When both events have been received the session is considered complete. Service is expected to handle massive amount of sessions.

### Requirements

\* Use language of your choice and database of your choice

\* All endpoints are REST APIs

\* API for receiving event batches (1-10 events / batch)

\* API for fetching session starts for the last X (X is defined by the user) hours for each country

\* API for fetching last 20 complete sessions for a given player

\* Data older than 1 year should be discarded

# Dataset: Session Events

The data has start and end events. It be downloaded from here:

- https://cdn.unityads.unity3d.com/assignments/assignment\_data.jsonl.bz2

### Start Events

{

"event": "start",

"country": "FI",

"player\_id": "0a2d12a1a7e145de8bae44c0c6e06629",

"session\_id": "4a0c43c9-c43a-42ff-ba55-67563dfa35d4",

"ts": "2016-12-02T12:48:05.520022"

}

### End Events

{

"event": "end",

"player\_id": "0a2d12a1a7e145de8bae44c0c6e06629",

"session\_id": "4a0c43c9-c43a-42ff-ba55-67563dfa35d4",

"ts": "2016-12-02T12:49:05.520022"

}