# Homework 1 – Hadoop (Fortnite with Hive)

*This document contains information regarding the homework given by the teachers in the PDP (Parallel Distributed Processing) course. For my homework, I was given the Fortnite dataset for which I had to use Hive to perform various queries to achieve specific results.*

## General information

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GitHub URL: <https://github.com/paxer2k/pdp-assignments>

## Explanation of steps

1. Firstly, did a bit of research on Hive to get a rough idea of how it works and what it offers.
2. I then downloaded the Fortnite Statistics dataset, unzipped it and uploaded it as a table in Hive.
3. I gave all the columns in the fields an appropriate name, such as (fn\_x) -> where fn stands for Fortnite and x is the name of the column in the CSV. Furthermore, I made sure to disregards the first row as it contains the names of the columns (header)
4. After uploading the table, I used the SQL window in the Hive view to write the queries that correspond to the assignment given.
5. Lastly, I spent time on the actual assignment by writing the appropriate queries needed to complete the three assignments given to me.

## Explanation of the source code

### Hive query #1: What time of the day is most popular? Make a top 3.

**Explanation**

The following query displays two columns (time\_of\_day & popularity). It looks at the count of each (eg. 2PM, 4PM, etc.) time of day and displays the highest count at the top and goes down the lower it gets. Furthermore, this query only shows the top 3 time of days played by limiting the dataset.

**Code snippet**

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### Hive query #2: What is the total damage done by players who have an accuracy between 20 and 40%?

**Explanation**

The following query displays two columns (accuracy & total\_damage) It looks for players who have the same accuracy (between 20% and 40%) and adds their damage dealt to other players (total\_damage). In other words, if 3 players have damage of 300 each and an accuracy of 25%, it would be (25% | 900). On top of this, it filters the data by getting rid of the % sign (by replacing it with an empty string) and converting the number string to a float so that the WHERE and AND portions can be queried on numerical data. Furthermore, it groups everything by accuracy and orders by both the accuracy and total\_damage in a descending ordering from highest accuracy to the lowest.

**Code snippet**

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### Hive query #3: What is the distance travelled per “Mental state” group.

**Explanation**

The following query displays two columns (mental state & total distance traveled). It looks at all of the distance traveled for each mental state and rounds it off to the nearest whole number. The rounding off was done because the expected output in the assignment was shown as a whole number. Furthermore, this query puts the least distance traveled at the top and the most distance traveled at the bottom. (They are all max distances for each mental state, just some are less than others)

**Code snippet**

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## Screenshots with steps and results:

Firstly, click on the 9 squares in the top right menu and head over to the “Hive View”.

A screenshot of a computer

Description automatically generated with medium confidence

Now click on “Upload Table” in the navigation bar and select the gear icon next to the “File type”. Make sure this stays on CSV:



Make sure to copy the file type settings over. Don’t forget to put first row as a header, otherwise the last query will not show proper results. If you forget this, add “WHERE fn\_mentalstate <> ‘Mental State’” to the LAST query, will which ignore the header in the query.

A screenshot of a computer

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Upload of the CSV file is possible either by checking the “Upload from Local” button which will allow you to upload locally or from the Hortonworks HDFS directly, but you’ll have to provide the path. After doing this, feel free to adhere to the following table structure, which is (fn\_nameofcolumn). Also, do not forget to change the data types of the columns.

A screenshot of a computer

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Now click on “Query” in the navigation bar and paste in your query into the “Query Editor” and press the “Execute” button. This will run your query and provide you with the corresponding result(s).

A screenshot of a computer

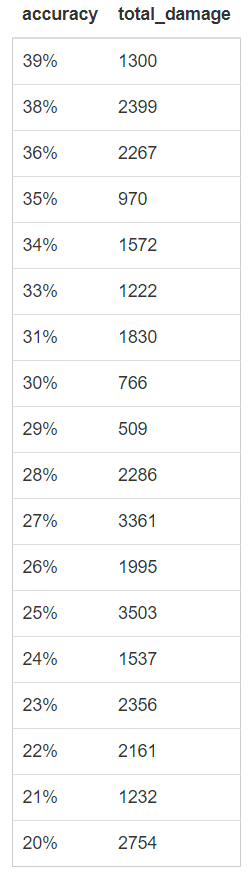
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### Result #1

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### Result #2



### Result #3

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