Java Project

We are creating a project to calculate analytics from the call data saved for a callcenter.

Each call that is received by the callcenter is saved in a database table

Call

Id	**Autogenerated Unique ID**
From_number	**Customer phone number from where the call is received**
Start_time	**Timestamp when the call was started**
End_Time	**Timestamp when the call ended**
Duration	**Duration of the call in seconds**

Sample Data

Id	From_number	Start_time	End_time	Duration
1	9999900000	13/01/2021 06:00:05	13/01/2021 06:23:06	181
2	9999902010	13/01/2021 06:12:49	13/01/2021 06:14:44	115
3	9991323232	13/01/2021 07:02:49	13/01/2021 07:14:44	715
4	8484848484	13/01/2021 08:12:49	13/01/2021 08:14:44	115
5	9378373737	13/01/2021 10:12:49	13/01/2021 10:14:44	115
6	9837373737	13/01/2021 12:12:49	13/01/2021 12:14:44	115
7	9973737373	13/01/2021 15:12:49	13/01/2021 15:14:44	115

Call data is available for many years and can contain millions of rows, so the solution that we are proposing should have a low time complexity.

Now we have to create the following analytics.

1> Hour of the day when the call volume is highest.
2> Hour of the day when the calls are longest.
3> Day of the week when the call volume is highest.
4> Day of the week when the calls are longest.

In the sample data:

Hour of the day when the call volume is highest is 6-7 AM

Hour of the day when the calls are longest is 7-8 AM

Output of the assignment

The assignment can be submitted as an independent java project, which can connect to the database, process the data and print the output on the console.

Or

The assignment can be submitted as an Spring boot project where when we request the analytics data through an URL, it processes the data and returns the analytics as response.