




Assignment 3

# PROBLEM1-TASK3

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## Problem-1

### Task-3

- Algorithm for Map Reduce:
  - Read Data from each raw file [2].
  - Maintain a HashMap to count the keywords occurrences, one for each file.
  - In HashMap the key will be keyword name and value will be integer occurrence of that keyword.
  - Map all the occurrences of keywords in that file using indexOf and substring.
  - Count all the occurrences of the keywords in that file and store in its HashMap.
  - Store all the HashMaps generated for each raw file in a list.
  - Reduce the list of HashMaps.
  - Write the total count for each keyword across all the raw files in a json file: (./Output/MapReduceCount/MapREduceCount.json) as shown in [figure 1 \[3\]](#)

```
ssh.cloud.google.com/projects/tribal-quasar-316422/zones/us-central1-a/instances/assignment3-data-ms?us
smanraj54@assignment3-data-ms:~/Assignment3/Output/MapReduceCount$ cat Keywords_Count.json
[
{
"Canada": "298",
"Nova Scotia": "176",
"education": "17",
"higher": "42",
"learning": "7",
"city": "33",
"accommodation": "0",
"price": "75"
}
] smanraj54@assignment3-data-ms:~/Assignment3/Output/MapReduceCount$
```

[Figure 1: MapReduce Count of Keywords \[1\]](#)

- Data in above figure clearly shows “Canada” keyword has highest count and “accommodation” keyword has the least count.

## References

- [1] Console.cloud.google.com. 2021. *Google Cloud Platform*. [online] Available at: <[https://console.cloud.google.com/compute/instancesDetail/zones/us-central1-a/instances/assignment3-data-ms?project=tribal-quasar-316422&rif\\_reserved](https://console.cloud.google.com/compute/instancesDetail/zones/us-central1-a/instances/assignment3-data-ms?project=tribal-quasar-316422&rif_reserved)> [Accessed 5 July 2021].
- [2] Newsapi.org. 2021. *News API – Search News and Blog Articles on the Web*. [online] Available at: <<https://newsapi.org/>> [Accessed 5 July 2021].