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**ROLL NO:** 20i-1822

**DEGREE:** BSCS

**SECTION:** F

**SUBJECT:** Parallel and Distributed Computing

**SUBMITTED TO:** Sir Aleem

**SUBJECT CODE:** CS-3006

**ASSIGNMENT NO:** 4

**DATE:** 7<sup>th</sup> April 2023

# Report for Assignment 4

## Question Number 1:

In this question we were tasked with picking the journal and year and counting the number of occurrences in it.

This was done via a hadoop MapReduce program run on the dblp dataset.

Below is the screenshot of the results:

This is the result in the localhost:9870 hadoop

The screenshot shows a web browser window titled "Browsing HDFS - Mozilla Firefox" with a single tab for "i201822@". The address bar shows "hadoop:9870/explorer.html#/Question1/Output3". The main content area is titled "File information - \_SUCCESS" and includes buttons for "Download", "Head the file (first 32K)", and "Tail the file (last 32K)". Below these is a section titled "File contents" which displays a list of journal and year combinations with their respective counts.

Journal	Year	Count
Syst.	-1999	26
Theory Comput.	Syst.-2000	22
Theory Comput.	Syst.-2001	18
Theory Comput.	Syst.-2002	35
Theory Comput.	Syst.-2003	35
Theory Comput.	Syst.-2004	34
Theory Comput.	Syst.-2005	37
Theory Comput.	Syst.-2006	50
Theory Comput.	Syst.-2007	65
Theory Comput.	Syst.-2008	61
Theory Comput.	Syst.-2009	85
Theory Comput.	Syst.-2010	83
Theory Comput.	Syst.-2011	80
Theory Comput.	Syst.-2012	66
Theory Comput.	Syst.-2013	67
Theory Comput.	Syst.-2014	73

6 Apr 02:25

Browsing HDFS - Mozilla Firefox

i201822@ × +

st:9870/explorer.html#/Question1/Output3

File information - \_SUCCESS

×

Download

Head the file (first 32K)

Tail the file (last 32K)

### File contents

ACM J. Exp. Algorithmics-2003	6
ACM J. Exp. Algorithmics-2004	6
ACM J. Exp. Algorithmics-2005	15
ACM J. Exp. Algorithmics-2006	17
ACM J. Exp. Algorithmics-2007	9
ACM J. Exp. Algorithmics-2008	32
ACM J. Exp. Algorithmics-2009	28
ACM J. Exp. Algorithmics-2010	12
ACM J. Exp. Algorithmics-2011	23
ACM J. Exp. Algorithmics-2012	16
ACM J. Exp. Algorithmics-2013	14
ACM J. Exp. Algorithmics-2014	18
ACM J. Exp. Algorithmics-2015	7
ACM J. Exp. Algorithmics-2016	18
ACM J. Exp. Algorithmics-2017	7
ACM J. Exp. Algorithmics-2018	14

6 Apr 02:26

Browsing HDFS - Mozilla Firefox

- i201822@ × +

st:9870/explorer.html#/Question1/Output3

File information - \_SUCCESS ×

DownloadHead the file (first 32K)Tail the file (last 32K)

File contents

Trans. SDPS-2004	39
Trans. SDPS-2005	25
Trans. SDPS-2006	27
Trans. SDPS-2007	24
Trans. SDPS-2008	19
Trans. SDPS-2009	12
Trans. SDPS-2010	17
Trans. SDPS-2011	19
<u>Transp. Sci.-1967</u>	26
<u>Transp. Sci.-1984</u>	24
<u>Transp. Sci.-1985</u>	33
<u>Transp. Sci.-1986</u>	31
<u>Transp. Sci.-1987</u>	28
<u>Transp. Sci.-1988</u>	31
<u>Transp. Sci.-1989</u>	37
Transp. Sci.-1990	27

This is the same output on the shown on the terminal:

```
6 Apr 02:12
hadoopuser@hadoopmaster: ~/Desktop/Question1

J. Multimodal User Interfaces,2009      5
J. Multimodal User Interfaces,2010      28
J. Multimodal User Interfaces,2011       7
J. Multimodal User Interfaces,2012      37
J. Multimodal User Interfaces,2013      27
J. Multimodal User Interfaces,2014      34
J. Multimodal User Interfaces,2015      34
J. Multimodal User Interfaces,2016      27
J. Multimodal User Interfaces,2017      25
J. Multimodal User Interfaces,2018      23
J. Multimodal User Interfaces,2019      33
J. Multimodal User Interfaces,2020      29
J. Multimodal User Interfaces,2021      33
J. Multimodal User Interfaces,2022      27
J. Multimodal User Interfaces,2023       3
J. Multiple Valued Log. Soft Comput.,2003 24
J. Multiple Valued Log. Soft Comput.,2004 18
J. Multiple Valued Log. Soft Comput.,2005 27
J. Multiple Valued Log. Soft Comput.,2006 32
J. Multiple Valued Log. Soft Comput.,2007 34
J. Multiple Valued Log. Soft Comput.,2008 34
J. Multiple Valued Log. Soft Comput.,2009 40
J. Multiple Valued Log. Soft Comput.,2010 37
J. Multiple Valued Log. Soft Comput.,2011 31
J. Multiple Valued Log. Soft Comput.,2012 85
J. Multiple Valued Log. Soft Comput.,2013 50
J. Multiple Valued Log. Soft Comput.,2014 59
J. Multiple Valued Log. Soft Comput.,2015 60
J. Multiple Valued Log. Soft Comput.,2016 63
J. Multiple Valued Log. Soft Comput.,2017 60
J. Multiple Valued Log. Soft Comput.,2018 55
J. Multiple Valued Log. Soft Comput.,2019 57
J. Multiple Valued Log. Soft Comput.,2020 56

6 Apr 02:13
hadoopuser@hadoopmaster: ~/Desktop/Question1

Telecommun. Syst.,2004      62
Telecommun. Syst.,2005      57
Telecommun. Syst.,2006      54
Telecommun. Syst.,2007      48
Telecommun. Syst.,2008      58
Telecommun. Syst.,2009      60
Telecommun. Syst.,2010      83
Telecommun. Syst.,2011      76
Telecommun. Syst.,2012      88
Telecommun. Syst.,2013     307
Telecommun. Syst.,2014     118
Telecommun. Syst.,2015     120
Telecommun. Syst.,2016     165
Telecommun. Syst.,2017     161
Telecommun. Syst.,2018     142
Telecommun. Syst.,2019     126
Telecommun. Syst.,2020     114
Telecommun. Syst.,2021     133
Telecommun. Syst.,2022     125
Telecommun. Syst.,2023      31
Telenatics Informatics,1998      18
Telenatics Informatics,1999      13
Telenatics Informatics,2000       11
Telenatics Informatics,2001       14
Telenatics Informatics,2002       21
Telenatics Informatics,2003       22
Telenatics Informatics,2004       24
Telenatics Informatics,2005       25
Telenatics Informatics,2006       20
Telenatics Informatics,2007       20
Telenatics Informatics,2008       21
Telenatics Informatics,2009       33
```

## Question Number 2:

In this question we were to form key value pairs in which the key was the author pairs and the value was 1 for each author pair.

The output of the question is shown below:

7 Apr 14:22

Browsing HDFS - Mozilla Firefox

st:9870/explorer.html#/Question1/q2Out6

Availability:

- hadoopmaster.myguest.virtualbox.org

File contents

Zifan Shen,Zihao Mu	1
Zifan Wang,Zihao Ding	1
Zifan Xu,Zizhao Wang	6
Zifan Yang,Zijian Wei	1
Zifeng Ding,Zongyue Li	1
Zifeng Hou,Zihua Guo	1
Zifeng Nie,Zizhen Wang	1
Zifeng Wang 0002,Zizhao Zhang	3
Zifeng Xu,Zongye Zhang	2
Zifu Wang,Zuqi Tang	1
Ziga Emersic,Ümit Kaçar	1
Ziga Lesjak,Ziga Spiclin	2
Ziga Rojec,Árpád Bürmen	1
Zigeng Niu,Özgür Kisi	1
Ziquan Cui,Zonliana Gan	9

Close

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Browsing HDFS - Mozilla Firefox

st:9870/explorer.html#/Question1/q2Out6

Availability:

- hadoopmaster.myguest.virtualbox.org

File contents

Zongnan Tang,Zuoqiang Shi	1
Zongjie Cao,Zongyong Cui	29
Zongkai Yang,Zuoyin Tang	1
Zongkang Jiang,Zu-Min Wang	1
Zongli Li,Zuoqing Zhang	1
Zongli Lin,Zongyu Zuo	4
Zonglin Jiang,Zongmin Hu	1
Zongming Liu,Zuozhen Liu	2
Zongming Lv,Zufan Zhang	2
Zongming Wang,Zuofang Yao	1
Zongnan Li,Zukun Lu	1
Zongqing Lu,Zuodong Yang	1
Zongwen Fan,Zuli Wang	0001 2
Zongwu Niu,Zongyuan Wu	1
Zongyue Wang,Zuning Jiang	2

Close

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## Browsing HDFS - Mozilla Firefox

st:9870/explorer.html#/Question1/q2Out6

Availability:

- [hadoopmaster.myguest.virtualbox.org](http://hadoopmaster.myguest.virtualbox.org)

### File contents

Zichao Yang,Zilong Yang 1  
Zichao Yang,Ziyu Wang 0001 1  
Zichao Zhao,Zizhi Wang 1  
Zichao Zhao,Zou Dan 1  
Zichen Deng,Zilu Cao 2  
Zichen Fan,Ziru Li 2  
Zichen Jiang,Zongmao Cheng 1  
Zichen Liu,Ziyang Liao 1  
Zichen Ma,Zihan Lu 2  
Zicheng Duan,Zixiang Ding 1  
Zicheng Liu 0001,Zixin Zhu 1  
Zicheng Liu 0001,Ziyu Jiang 1  
Zicheng Liu 0006,Zihan Liu 2  
Zicheng Wang,Zijun Bi 1

Close



st:9870/explorer.html#/Question1/q2Out6

Availability:

- [hadoopmaster.myquest.virtualbox.org](http://hadoopmaster.myquest.virtualbox.org)

#### File contents

```
Özge A. Kale,Özge Andıç-Çakır    1
Özge Sahin Zorluoglu,Özgür Kabak 1
Özgül Vupa,Özlem Ege Oruç    1
Özgür Armaneri,Özgür Yalçinkaya  1
Özgür Asar,Özlem İlk        4
Özgür B. Akan,Özgür Ergül      7
Özgür Erçetin,Özgür Gürbüz    8
Özgür Oruç,Ümit Aygölü       2
Özgür Ulusoy,Özlem Nurcan Subakan 1
Özgür Yılmaz,Ümit Keles       1
Özgür Çelik,Ümit Çetinkaya    1
Özlem Alpu,Özlem Oktal        1
Özlem Küçük hüseyin,Ümit Zeybek 1
Özlem Yılmaz,Özlem Çavus      1
```

Close