



## **INF3710 –Bases de données**

**Hiver 2016**

**TP No. 5**

**Groupe 1**

**1792473 –Richer Archambault**

**1794745 – Kevin Pantelakis**

**Soumis à : Sana Fodil**

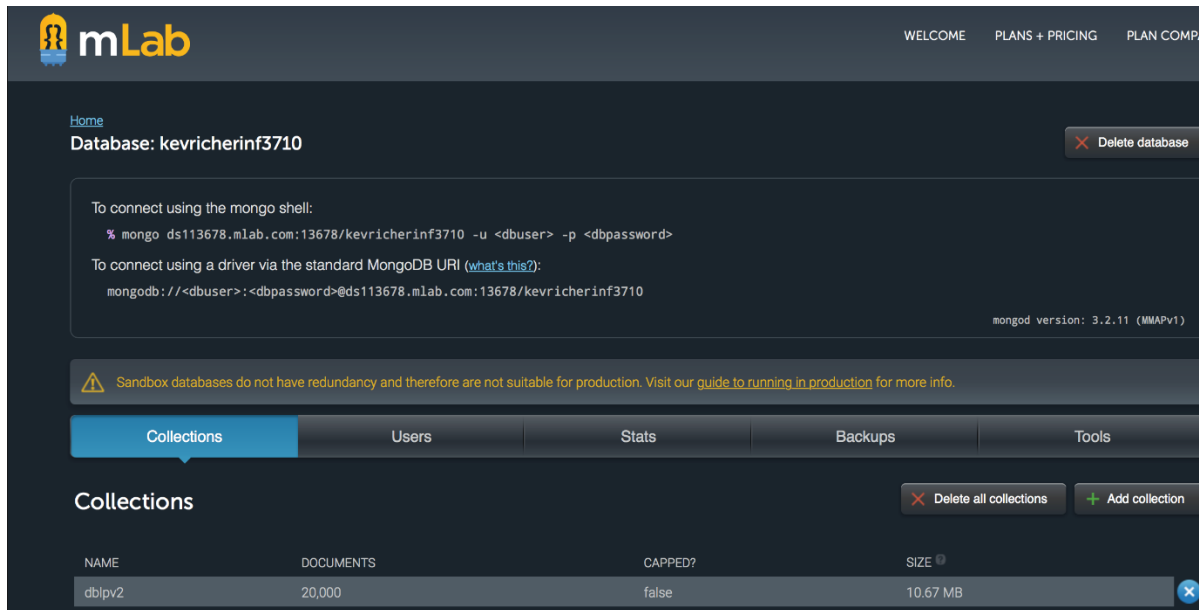
**3 décembre 2016**

## Question #2

Présentation du nombre de document ajoutés (20 000), le nom de la base de données (kevricherinf3710) le nom de déploiement ainsi que le nom d'utilisateur.

Username : root

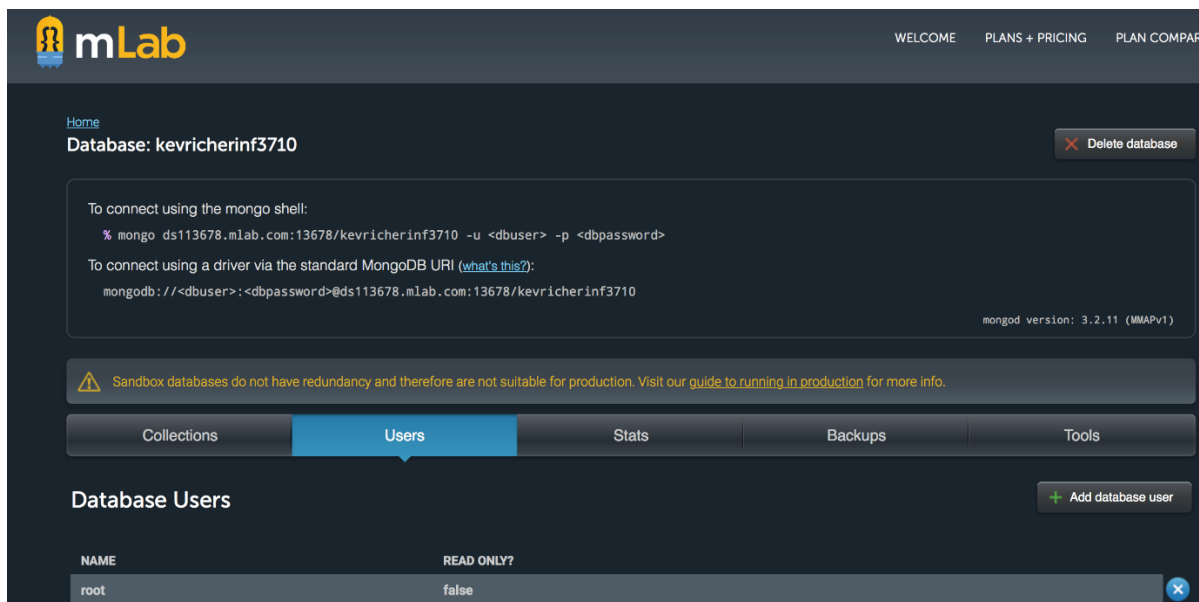
Password : 123



The screenshot shows the mLab web interface for a database named 'kevricherinf3710'. The 'Collections' tab is selected, displaying a table with the following data:

NAME	DOCUMENTS	CAPPED?	SIZE
dblpv2	20,000	false	10.67 MB

Figure 1: Screenshot du nom de la database et du nombre de documents



The screenshot shows the mLab web interface for the same database 'kevricherinf3710'. The 'Users' tab is selected, displaying a table with the following data:

NAME	READ ONLY?
root	false

Figure 2: Screenshot du nom d'utilisateur

### Question #3

- a) Afficher la liste de tous les livres publiés depuis 2000;

```
db.dblpv2.find (
    { "type" : "Book", "year": { $gte:2000 } },
    { "_id": 0 }
)
```

- b) Afficher la liste des publications parues depuis 2013 : le titre et le nombre de pages ;

```
db.dblpv2.find (
    { "year": { $gte:2013 } }
    { "_id": 0, "title": 1, pages: { $subtract: [{ "$pages" : "$end" }, { "$pages" : "$start" } ] } }
)
```

- c) Afficher la liste de tous les éditeurs (type "publisher") distincts ;

```
db.dblpv2.distinct ( "publisher" )
```

- d) Trier les publications de "Ingrid Zukerman" ordonnés selon la date (le plus récent d'abord) ;

```
db.dblpv2.find (
    { "authors" : " Ingrid Zukerman" },
    { "_id": 0 }
).sort("year" :-1)
```

- e) Compter le nombre d'articles de "Ingrid Zukerman" ;

```
db.dblpv2.find (
    { "authors" : " Ingrid Zukerman", "type": "Article" },
    { "_id": 0 }
).count()
```

- f) Afficher les publications dont Ingrid Zuckerman et Fabian Bohnert sont les deux seuls auteurs ;

```
db.dblpv2.find (
    { $and : [ { "authors" : { $size : 2 },
                { "authors" : " Ingrid Zukerman" },
                { "authors" : "Fabian Bohnert" } ] },
    { "_id": 0 }
)
```

g) Insérer un livre fictif dont vous êtes l'auteur unique ;

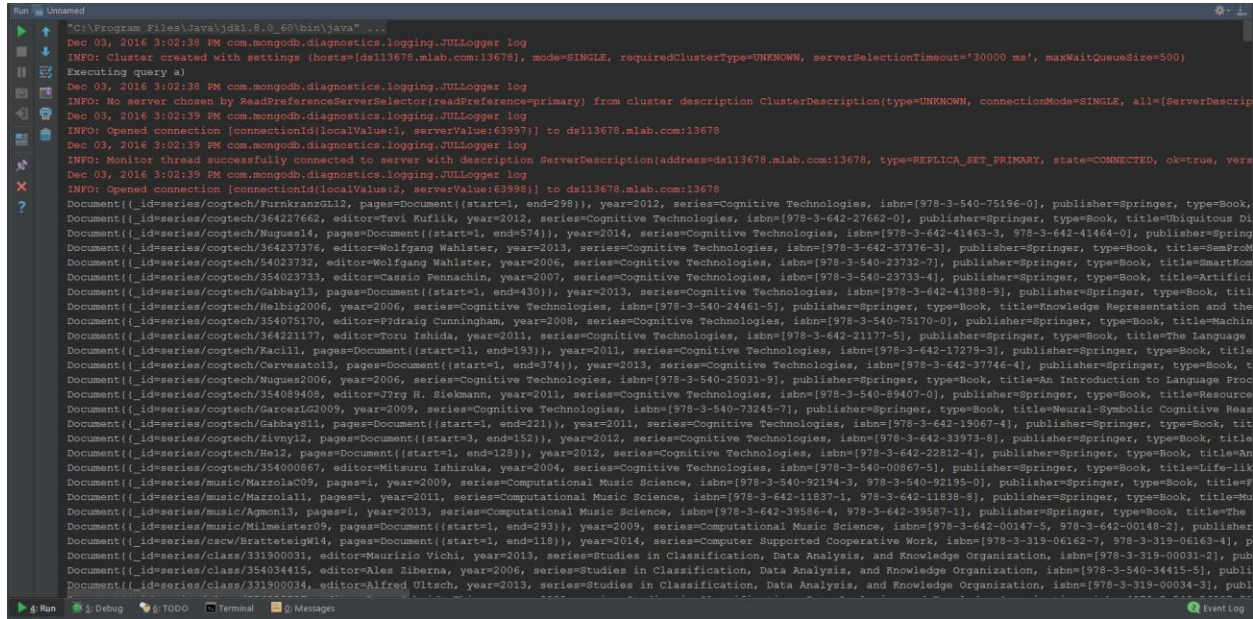
```
i= {  
    "_id":"series/pantech/000042"),  
    "type":"Book",  
    "volume": 42,  
    "pages":{"start":1, "end":123},  
    "title":"J'ai perdu mon papa"  
    "year":"2015",  
    "publisher":"CoopPoly",  
    "series":"Survivre après le départ de ses parents",  
    "authors":["Kevin Pantelakis" ],  
    "isbn":["000-1-234-42429-3"]  
}  
db.dblpv2.insertOne(i)
```

h) Modifier ce livre en ajoutant un second auteur, par exemple celui de votre coéquipier.

```
db.employe.updateOne(  
    { _id : "series/pantech/000042" } ,  
    { $addToSet : { " authors " : "Richer Archambault" } ,  
    { "multi":false}  
)
```

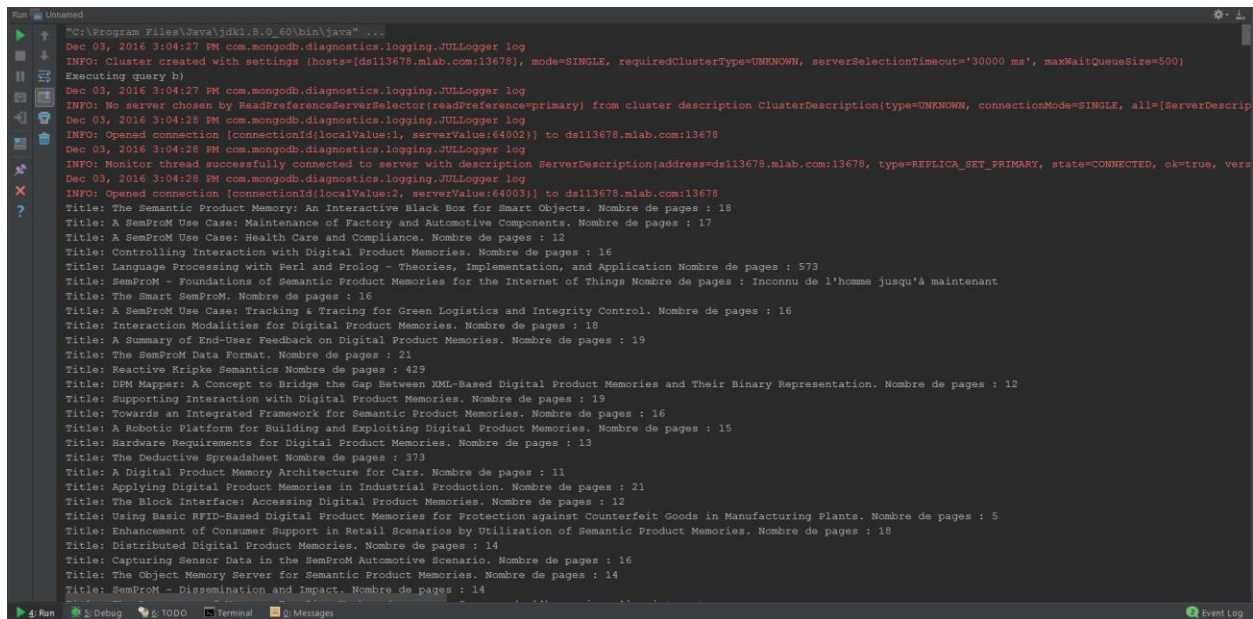
## Question #4

Comme le résultat de la requête a) retourne un total de 1709 livres différents et que la requête b) retourne 3369 publication, seulement une partie de la sortie de l'exécution est montré sur les figures 3 et 4.



```
Run Unnamed
"C:\Program Files\Java\jdk1.8.0_60\bin\java" ...
Dec 03, 2016 3:02:38 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings (hosts=[ds113678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
Executing query a)
Dec 03, 2016 3:02:38 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: No server chosen by ReadPreferenceServerSelector(readPreference=primary) from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescrip
Dec 03, 2016 3:02:39 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, vers
Dec 03, 2016 3:02:39 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection (connectionId[localValue:1, serverValue:63997]) to ds113678.mlab.com:13678
Dec 03, 2016 3:02:39 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection (connectionId[localValue:2, serverValue:63998]) to ds113678.mlab.com:13678
Document({_id:series/cogtech/FunkranGL12, pages=Document({start=1, end=298}), year=2012, series=Cognitive Technologies, isbn=[978-3-540-75196-0], publisher=Springer, type=Book,
Document({_id:series/cogtech/Nugues14, pages=Document({start=1, end=574}), year=2014, series=Cognitive Technologies, isbn=[978-3-642-41463-3, 978-3-642-41464-0], publisher=Spring
Document({_id:series/cogtech/364237376, editor=Wolfgang Wahlster, year=2013, series=Cognitive Technologies, isbn=[978-3-642-37376-3], publisher=Springer, type=Book, title=SemProM
Document({_id:series/cogtech/54023732, editor=Wolfgang Wahlster, year=2006, series=Cognitive Technologies, isbn=[978-3-540-23732-7], publisher=Springer, type=Book, title=SmartKio
Document({_id:series/cogtech/354023733, editor=Cassio Pennachin, year=2007, series=Cognitive Technologies, isbn=[978-3-540-23733-4], publisher=Springer, type=Book, title=Artifici
Document({_id:series/cogtech/Gabay13, pages=Document({start=1, end=430}), year=2013, series=Cognitive Technologies, isbn=[978-3-642-41388-9], publisher=Springer, type=Book, titl
Document({_id:series/cogtech/Selbig2006, year=2006, series=Cognitive Technologies, isbn=[978-3-540-24461-5], publisher=Springer, type=Book, title=Knowledge Representation and the
Document({_id:series/cogtech/354076170, editor=Edridge Cunningham, year=2008, series=Cognitive Technologies, isbn=[978-3-540-75170-0], publisher=Springer, type=Book, title=Schach
Document({_id:series/cogtech/364221177, editor=Toru Ishida, year=2011, series=Cognitive Technologies, isbn=[978-3-642-21177-5], publisher=Springer, type=Book, title=The Language
Document({_id:series/cogtech/Kacil1, pages=Document({start=1, end=193}), year=2011, series=Cognitive Technologies, isbn=[978-3-642-17279-3], publisher=Springer, type=Book, title
Document({_id:series/cogtech/Cervaseat03, pages=Document({start=1, end=374}), year=2013, series=Cognitive Technologies, isbn=[978-3-642-37746-4], publisher=Springer, type=Book, t
Document({_id:series/cogtech/Nugues2006, year=2006, series=Cognitive Technologies, isbn=[978-3-540-25031-9], publisher=Springer, type=Book, title=An Introduction to Language Proc
Document({_id:series/cogtech/354089408, editor=Jörg H. Siekmann, year=2011, series=Cognitive Technologies, isbn=[978-3-540-89407-0], publisher=Springer, type=Book, title=Resource
Document({_id:series/cogtech/GarcesL2009, year=2009, series=Cognitive Technologies, isbn=[978-3-540-73245-7], publisher=Springer, type=Book, title=Neural-Symbolic Cognitive Reas
Document({_id:series/cogtech/GabayS11, pages=Document({start=1, end=221}), year=2011, series=Cognitive Technologies, isbn=[978-3-642-19067-4], publisher=Springer, type=Book, tit
Document({_id:series/cogtech/Sivny12, pages=Document({start=3, end=152}), year=2012, series=Cognitive Technologies, isbn=[978-3-642-33973-8], publisher=Springer, type=Book, title
Document({_id:series/cogtech/Sel2, pages=Document({start=1, end=128}), year=2012, series=Cognitive Technologies, isbn=[978-3-642-22812-4], publisher=Springer, type=Book, title=An
Document({_id:series/cogtech/354000867, editor=Mitsuru Ishizuka, year=2004, series=Cognitive Technologies, isbn=[978-3-540-00867-5], publisher=Springer, type=Book, title=Life-li
Document({_id:series/music/MazzolaC09, pages=i, year=2009, series=Computational Music Science, isbn=[978-3-540-92195-0], publisher=Springer, type=Book, title=
Document({_id:series/music/Mazzola11, pages=i, year=2011, series=Computational Music Science, isbn=[978-3-642-11837-1, 978-3-642-11838-3], publisher=Springer, type=Book, title=Ma
Document({_id:series/music/Agmon13, pages=i, year=2013, series=Computational Music Science, isbn=[978-3-642-39586-4, 978-3-642-39587-1], publisher=Springer, type=Book, title=The
Document({_id:series/music/Milmeister09, pages=Document({start=1, end=293}), year=2009, series=Computational Music Science, isbn=[978-3-642-00147-5, 978-3-642-00148-2], publisher
Document({_id:series/cscw/Bratteteig14, pages=Document({start=1, end=118}), year=2014, series=Computer Supported Cooperative Work, isbn=[978-3-319-06162-7, 978-3-319-06163-4], p
Document({_id:series/class/331900031, editor=Maurizio Vichi, year=2013, series=Studies in Classification, Data Analysis, and Knowledge Organization, isbn=[978-3-319-00031-2], publ
Document({_id:series/class/354034415, editor=Alex Ziberna, year=2006, series=Studies in Classification, Data Analysis, and Knowledge Organization, isbn=[978-3-540-34415-5], publ
Document({_id:series/class/331900034, editor=Alfred Ultsch, year=2013, series=Studies in Classification, Data Analysis, and Knowledge Organization, isbn=[978-3-319-00034-3], publ
```

Figure 3: Résultat de l'exécution de la requête a)



```
Run Unnamed
"C:\Program Files\Java\jdk1.8.0_60\bin\java" ...
Dec 03, 2016 3:04:27 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings (hosts=[ds113678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
Executing query b)
Dec 03, 2016 3:04:27 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: No server chosen by ReadPreferenceServerSelector(readPreference=primary) from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescrip
Dec 03, 2016 3:04:28 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, vers
Dec 03, 2016 3:04:28 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection (connectionId[localValue:1, serverValue:64002]) to ds113678.mlab.com:13678
Dec 03, 2016 3:04:28 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection (connectionId[localValue:2, serverValue:64003]) to ds113678.mlab.com:13678
Title: The Semantic Product Memory: An Interactive Black Box for Smart Objects. Nombre de pages : 18
Title: A SemProM Use Case: Maintenance of Factory and Automotive Components. Nombre de pages : 17
Title: A SemProM Use Case: Health Care and Compliance. Nombre de pages : 12
Title: Controlling Interaction with Digital Product Memories. Nombre de pages : 16
Title: Language Processing with Perl and ProLog - Theories, Implementation, and Application. Nombre de pages : 573
Title: SemProM - Foundations of Semantic Product Memories for the Internet of Things. Nombre de pages : Inconnu de l'homme jusqu'à maintenant
Title: The Smart SemProM. Nombre de pages : 16
Title: A SemProM Use Case: Tracking & Tracing for Green Logistics and Integrity Control. Nombre de pages : 16
Title: Interaction Modalities for Digital Product Memories. Nombre de pages : 18
Title: A Summary of End-User Feedback on Digital Product Memories. Nombre de pages : 19
Title: The SemProM Data Format. Nombre de pages : 21
Title: Reactive Kripke Semantics. Nombre de pages : 429
Title: DPM Mapper: A Concept to Bridge the Gap Between XML-Based Digital Product Memories and Their Binary Representation. Nombre de pages : 12
Title: Supporting Interaction with Digital Product Memories. Nombre de pages : 19
Title: Towards an Integrated Framework for Semantic Product Memories. Nombre de pages : 16
Title: A Robotic Platform for Building and Exploiting Digital Product Memories. Nombre de pages : 15
Title: Hardware Requirements for Digital Product Memories. Nombre de pages : 13
Title: The Reductive Spreadsheet. Nombre de pages : 373
Title: A Digital Product Memory Architecture for Cars. Nombre de pages : 11
Title: Applying Digital Product Memories in Industrial Production. Nombre de pages : 21
Title: The Block Interface: Accessing Digital Product Memories. Nombre de pages : 12
Title: Using Basic RFID-Based Digital Product Memories for Protection against Counterfeit Goods in Manufacturing Plants. Nombre de pages : 5
Title: Enhancement of Consumer Support in Retail Scenarios by Utilization of Semantic Product Memories. Nombre de pages : 18
Title: Distributed Digital Product Memories. Nombre de pages : 14
Title: Capturing Sensor Data in the SemProM Automotive Scenario. Nombre de pages : 16
Title: The Object Memory Server for Semantic Product Memories. Nombre de pages : 14
Title: SemProM - Dissemination and Impact. Nombre de pages : 14
```

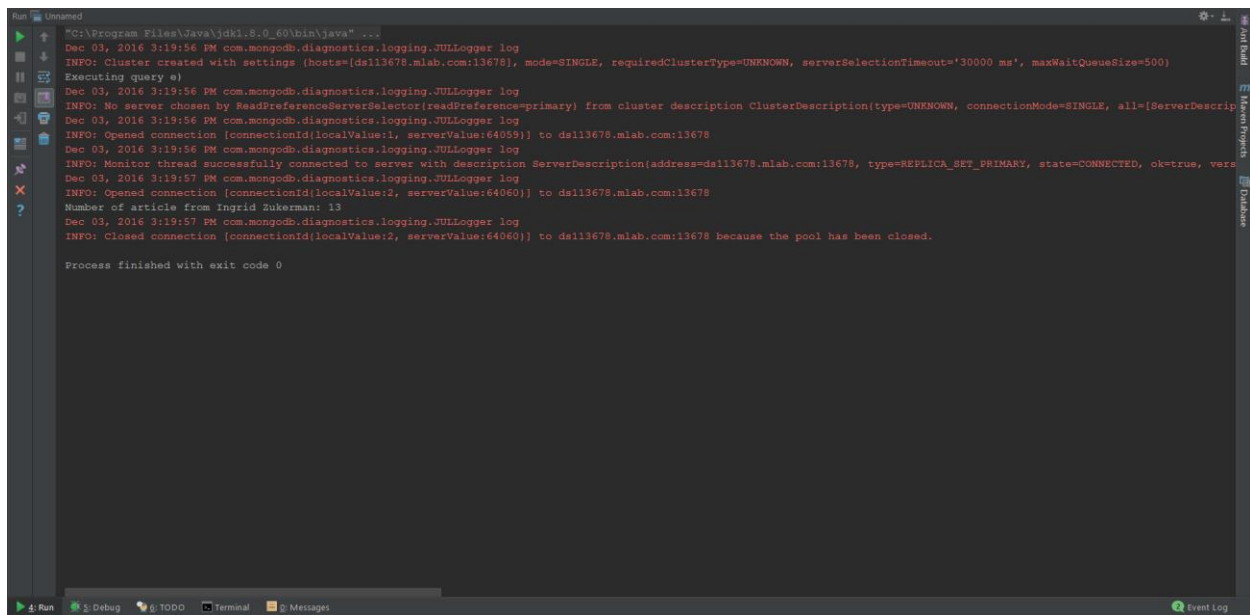
Figure 4: Résultat de la requête b)

```
Run Unnamed
"C:\Program Files\Java\jdk1.8.0_60\bin\java" ...
Dec 03, 2016 3:18:03 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings (hosts=[ds113678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
Executing query c)
Dec 03, 2016 3:18:03 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: No server chosen by ReadPreferenceServerSelector(readPreference=primary) from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescrip
Dec 03, 2016 3:18:03 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:1, serverValue:64053}] to ds113678.mlab.com:13678
Dec 03, 2016 3:18:03 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, vers
Dec 03, 2016 3:18:04 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:2, serverValue:64054}] to ds113678.mlab.com:13678
Springer
IOS Press
Atlantis Press
Hermann-Verdrations
Cypadur's-Verdrations
USEMIX Association
Morgan & Claypool Publishers
Kluwer
Dec 03, 2016 3:18:04 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Closed connection [connectionId{localValue:2, serverValue:64054}] to ds113678.mlab.com:13678 because the pool has been closed.
Process finished with exit code 0
```

Figure 5: Les 8 résultats de la requête c)

```
Run Unnamed
"C:\Program Files\Java\jdk1.8.0_60\bin\java" ...
Dec 03, 2016 3:19:07 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings (hosts=[ds113678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
Executing query d)
Dec 03, 2016 3:19:07 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: No server chosen by ReadPreferenceServerSelector(readPreference=primary) from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescrip
Dec 03, 2016 3:19:07 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:1, serverValue:64057}] to ds113678.mlab.com:13678
Dec 03, 2016 3:19:07 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, vers
Dec 03, 2016 3:19:08 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:2, serverValue:64058}] to ds113678.mlab.com:13678
2013, Monitoring Personal Safety by Unobtrusively Detecting Unusual Periods of Inactivity. [Masud Moshlaghi, Ingrid Zukerman, David W. Albrecht, R. Andrew Russell]
2012, Studies to Determine User Requirements Regarding In-Home Monitoring Systems. [Melanie Frances Larizza, Ingrid Zukerman, Fabian Bohnert, R. Andrew Russell, Lucy Busija, Davi
2012, GECKOrecommender: Personalised Theme and Tour Recommendations for Museums. [Fabian Bohnert, Ingrid Zukerman, Junaedy Laurens]
2012, Realistic Simulation of Museum Visitors' Movements as a Tool for Assessing Sensor-Based User Models. [Fabian Bohnert, Ingrid Zukerman, David W. Albrecht]
2010, A User- and Item-Aware Weighting Scheme for Combining Predictive User Models. [Fabian Bohnert, Ingrid Zukerman]
2010, Personalised Pathway Prediction. [Fabian Bohnert, Ingrid Zukerman]
2010, Collaborative Inference of Sentiments from Texts. [Vanir Seroussi, Ingrid Zukerman, Fabian Bohnert]
2009, Non-intrusive Personalisation of the Museum Experience. [Fabian Bohnert, Ingrid Zukerman]
2009, Assessing the Impact of Measurement Uncertainty on User Models in Spatial Domains. [Daniel Francis Schmidt, Ingrid Zukerman, David W. Albrecht]
2005, Modeling Agents that Exhibit Variable Performance in a Collaborative Setting. [Ingrid Zukerman, Christian Guttman]
2005, Modeling Suppositions in Users' Arguments. [Sarah George, Ingrid Zukerman, Michael Niemann]
2003, Incorporating a User Model into an Information Theoretic Framework for Argument Interpretation. [Ingrid Zukerman, Sarah George, Mark George]
2001, An Integrated Approach for Generating Arguments and Rebuttals and Understanding Rejoinders. [Ingrid Zukerman]
Dec 03, 2016 3:19:08 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Closed connection [connectionId{localValue:2, serverValue:64058}] to ds113678.mlab.com:13678 because the pool has been closed.
Process finished with exit code 0
```

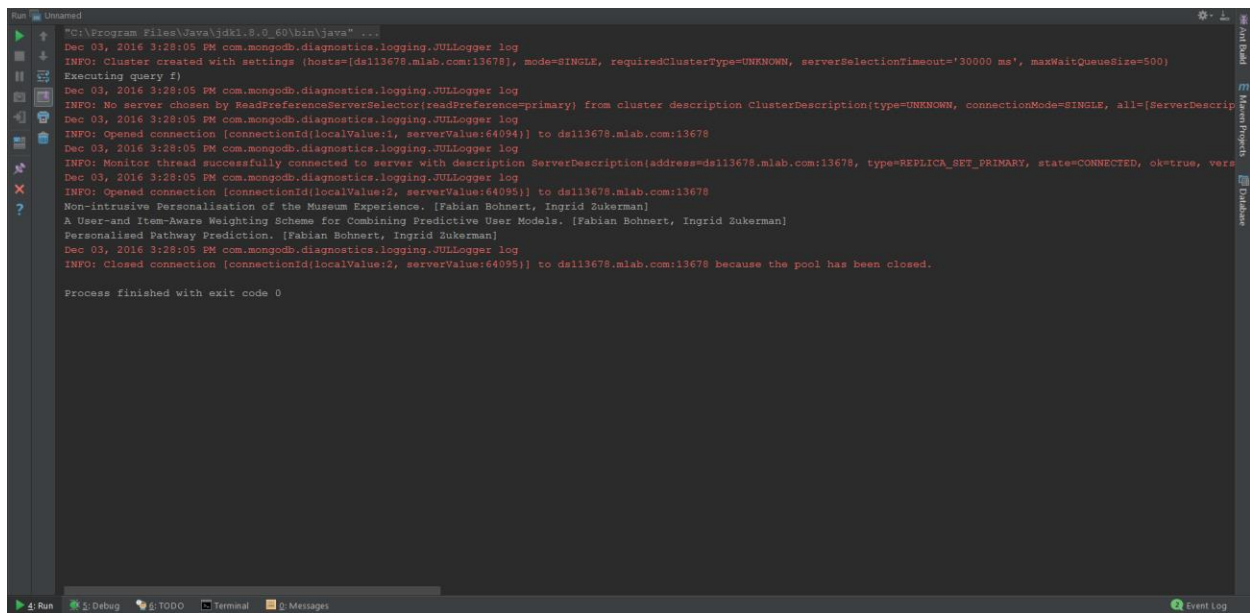
Figure 6: Résultat de la requête d)



```
Run Unnamed
"C:\Program Files\Java\jdk1.8.0_60\bin\java" ...
Dec 03, 2016 3:19:56 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings (hosts=[ds113678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
Executing query e)
Dec 03, 2016 3:19:56 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: No server chosen by ReadPreferenceServerSelector(readPreference=primary) from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescrip
Dec 03, 2016 3:19:56 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:1, serverValue:64059}] to ds113678.mlab.com:13678
Dec 03, 2016 3:19:56 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, vers
Dec 03, 2016 3:19:57 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:2, serverValue:64060}] to ds113678.mlab.com:13678
Number of article from Ingrid Zukerman: 13
Dec 03, 2016 3:19:57 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Closed connection [connectionId{localValue:2, serverValue:64060}] to ds113678.mlab.com:13678 because the pool has been closed.

Process finished with exit code 0
```

Figure 7: Résultat de la requête e)

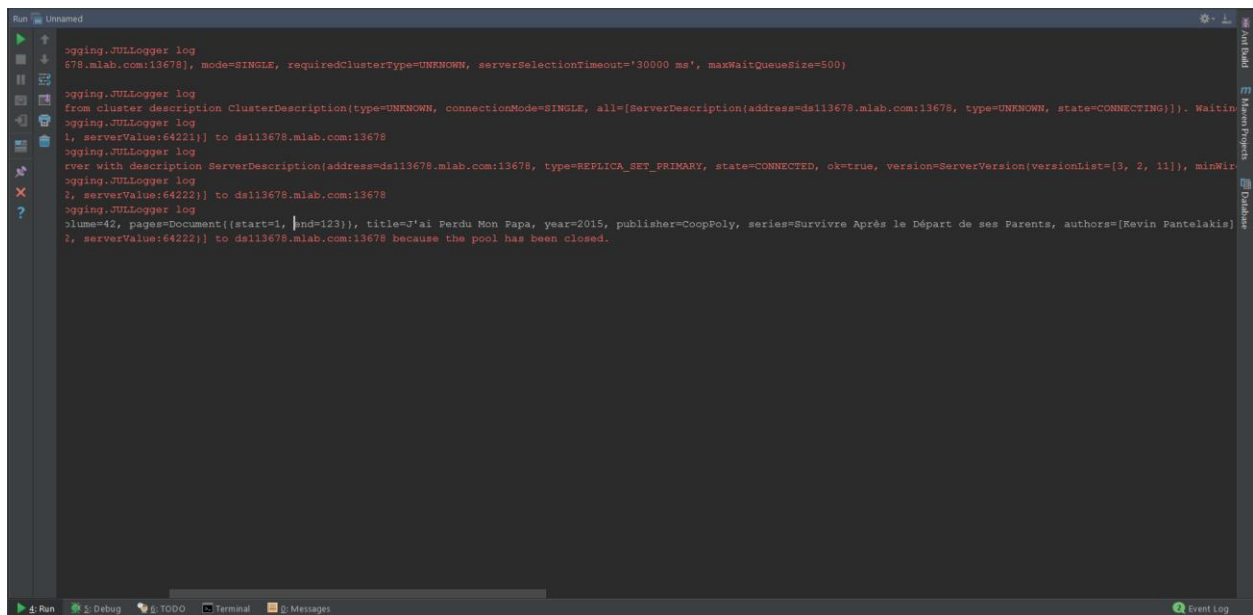


```
Run Unnamed
"C:\Program Files\Java\jdk1.8.0_60\bin\java" ...
Dec 03, 2016 3:28:05 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings (hosts=[ds113678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
Executing query f)
Dec 03, 2016 3:28:05 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: No server chosen by ReadPreferenceServerSelector(readPreference=primary) from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescrip
Dec 03, 2016 3:28:05 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:1, serverValue:64094}] to ds113678.mlab.com:13678
Dec 03, 2016 3:28:05 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, vers
Dec 03, 2016 3:28:05 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:2, serverValue:64095}] to ds113678.mlab.com:13678
Non-intrusive Personalisation of the Museum Experience. [Fabian Bohnert, Ingrid Zukerman]
A User-and Item-Aware Weighting Scheme for Combining Predictive User Models. [Fabian Bohnert, Ingrid Zukerman]
Personalised Pathway Prediction. [Fabian Bohnert, Ingrid Zukerman]
Dec 03, 2016 3:28:05 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Closed connection [connectionId{localValue:2, serverValue:64095}] to ds113678.mlab.com:13678 because the pool has been closed.

Process finished with exit code 0
```

Figure 8: Résultat de la requête f)



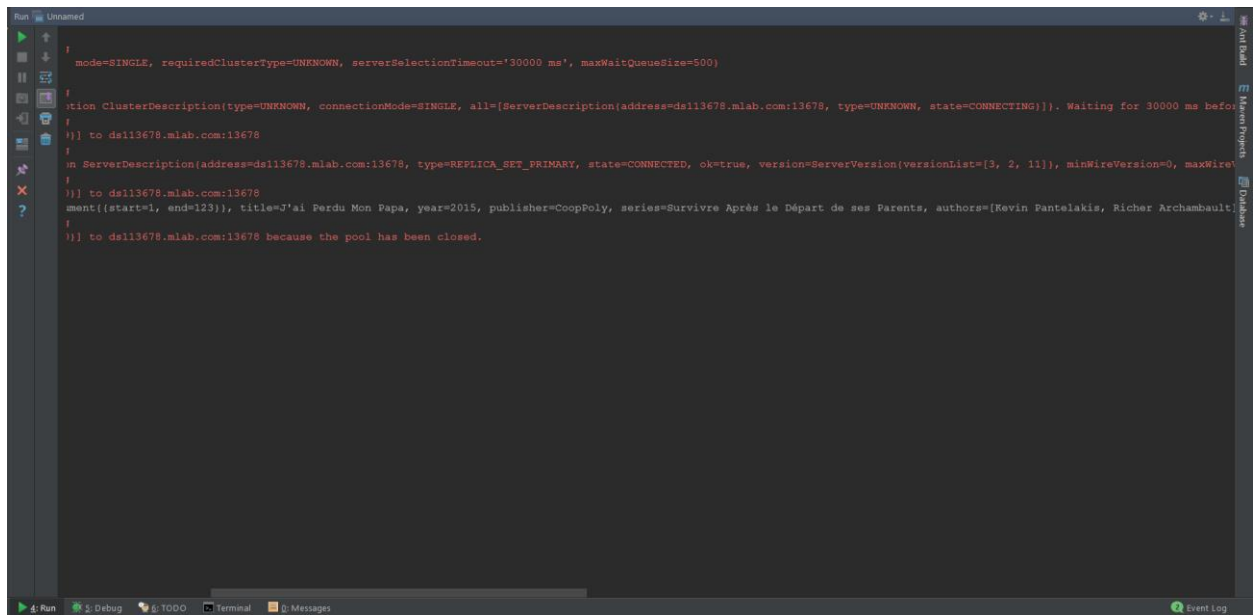


The screenshot shows an IDE window titled 'Run' with a dark theme. The main editor area displays the following log output:

```
gging.JULLogger log
678.mlab.com:13678], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
gging.JULLogger log
from cluster description ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescription(address=ds113678.mlab.com:13678, type=UNKNOWN, state=CONNECTING)]). Waiting
gging.JULLogger log
1, serverValue:64222]] to ds113678.mlab.com:13678
gging.JULLogger log
rver with Description ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, version=ServerVersion(versionList=[3, 2, 11]), minWire
gging.JULLogger log
2, serverValue:64222]] to ds113678.mlab.com:13678
gging.JULLogger log
lume=42, pages=Document({start=1, end=123}), title='J'ai Perdu Mon Papa, year=2015, publisher=CoopPoly, series=Survivre Après le Départ de ses Parents, authors=[Kevin Pantelakis]
2, serverValue:64222]] to ds113678.mlab.com:13678 because the pool has been closed.
```

The IDE interface includes a sidebar on the left with icons for Run, Debug, TODO, Terminal, and Messages. The bottom status bar shows 'Run', 'Debug', 'TODO', 'Terminal', 'Messages', and 'Event Log'.

Figure 9: Résultat de la requête g)



The screenshot shows an IDE window titled 'Run' with a dark theme. The main editor area displays the following log output:

```
mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500)
tion ClusterDescription(type=UNKNOWN, connectionMode=SINGLE, all=[ServerDescription(address=ds113678.mlab.com:13678, type=UNKNOWN, state=CONNECTING)]). Waiting for 30000 ms before
]] to ds113678.mlab.com:13678
n ServerDescription(address=ds113678.mlab.com:13678, type=REPLICA_SET_PRIMARY, state=CONNECTED, ok=true, version=ServerVersion(versionList=[3, 2, 11]), minWireVersion=0, maxWireVer
]] to ds113678.mlab.com:13678
ment({start=1, end=123}), title='J'ai Perdu Mon Papa, year=2015, publisher=CoopPoly, series=Survivre Après le Départ de ses Parents, authors=[Kevin Pantelakis, Richer Archambault]
]] to ds113678.mlab.com:13678 because the pool has been closed.
```

The IDE interface includes a sidebar on the left with icons for Run, Debug, TODO, Terminal, and Messages. The bottom status bar shows 'Run', 'Debug', 'TODO', 'Terminal', 'Messages', and 'Event Log'.

Figure 10: Résultat de la requête h)