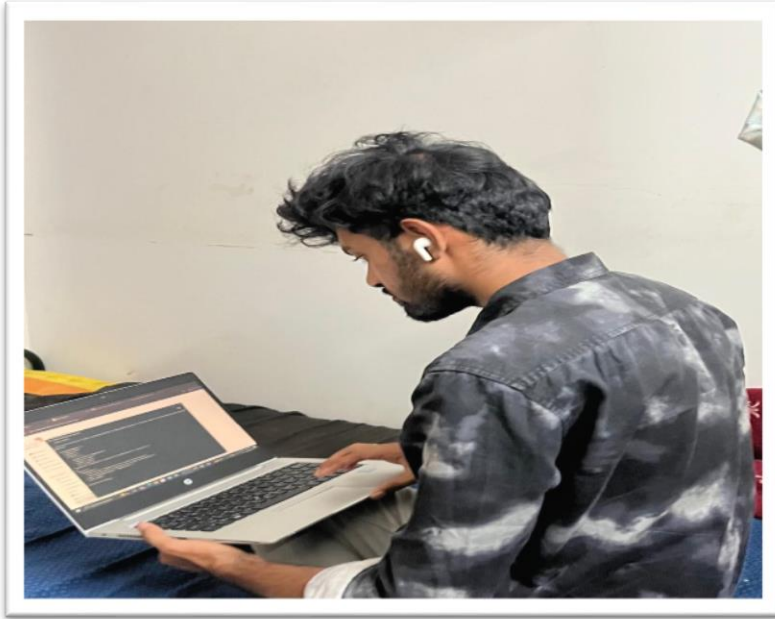
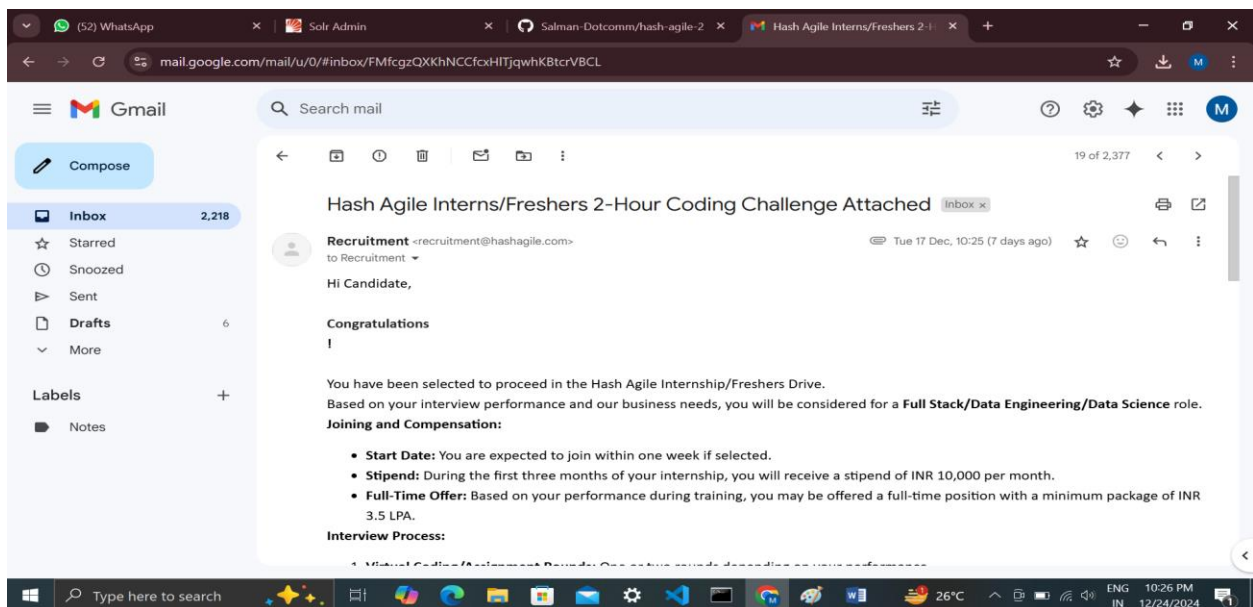


## **HASH AGILE ASSIGNMENT 2**

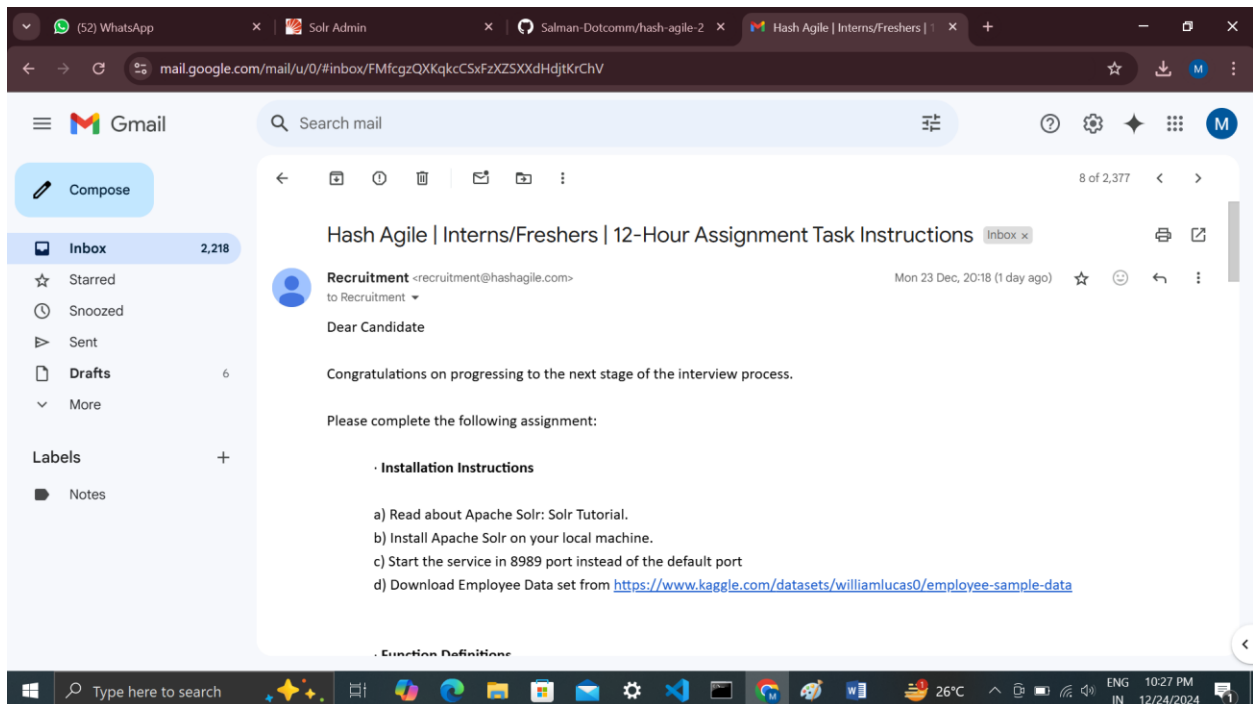
- **Full Name:** MOHAMED SOWKATH SALMAN S
- **Pic:**



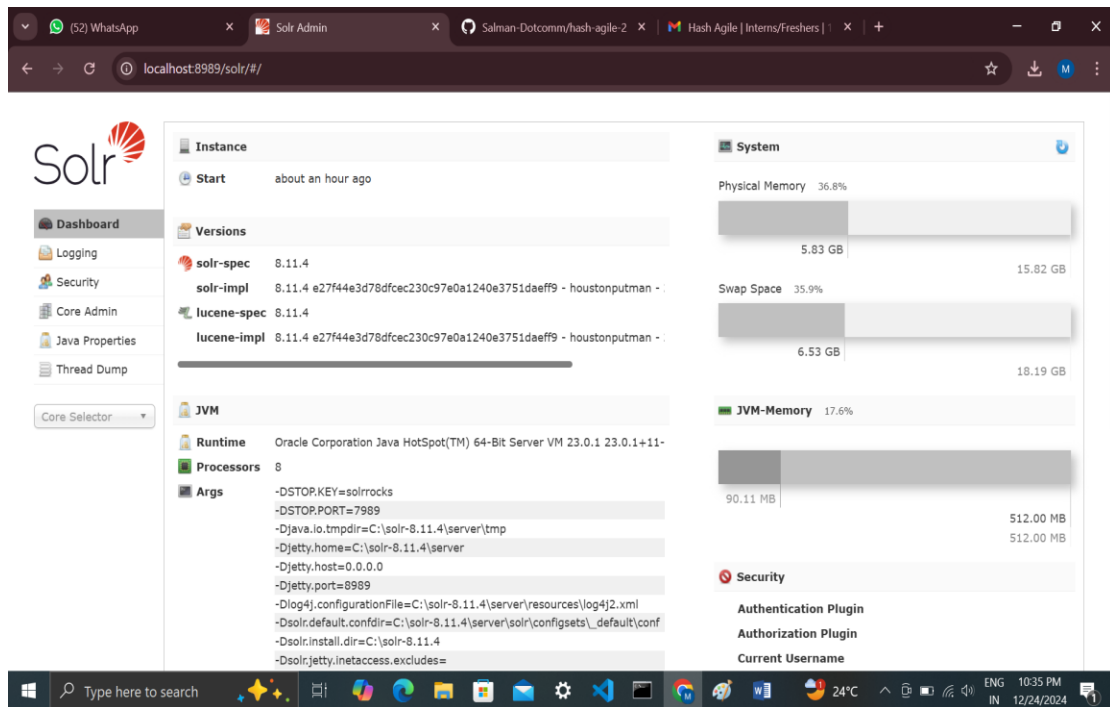
- **FIRST ROUND EMAIL SCREENSHOT:**



## • SECOND ROUND EMAIL SCREENSHOT:



- GITHUB LINK ROUND 1 : <https://github.com/Salman-Dotcomm/hash-agile-2.git>
- GITHUB LINK ROUND 2 : <https://github.com/Salman-Dotcomm/hash-agile-2.git>
- **Screenshot as proof of the service running on port 8989**



a) Var v\_nameCollection = 'Hash\_<Your Name>'

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5247]
(c) Microsoft Corporation. All rights reserved.

C:\solr-8.11.4\bin>solr start
Java HotSpot(TM) 64-Bit Server VM warning: JVM cannot use large page memory because it does not have enough privilege to lock pages in memory.
Waiting up to 30 to see Solr running on port 8989
Started Solr server on port 8989. Happy searching!

C:\solr-8.11.4\bin>solr.cmd create -c hash_salman_
```

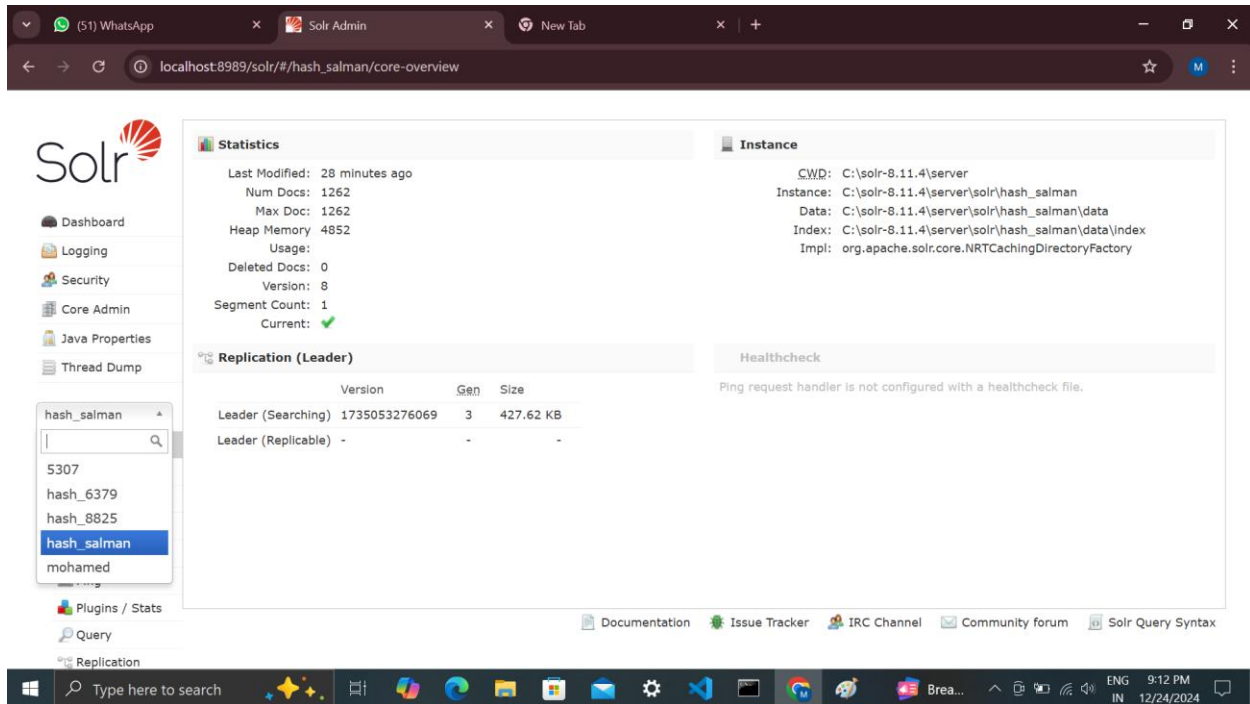
b) var v\_phoneCollection ='Hash\_<Your Phone last four digits

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5247]
(c) Microsoft Corporation. All rights reserved.

C:\solr-8.11.4\bin>solr start
Java HotSpot(TM) 64-Bit Server VM warning: JVM cannot use large page memory because it does not have enough privilege to lock pages in memory.
Waiting up to 30 to see Solr running on port 8989
Started Solr server on port 8989. Happy searching!

C:\solr-8.11.4\bin>solr.cmd create -c hash_5307
```

c) createCollection(v\_nameCollection)



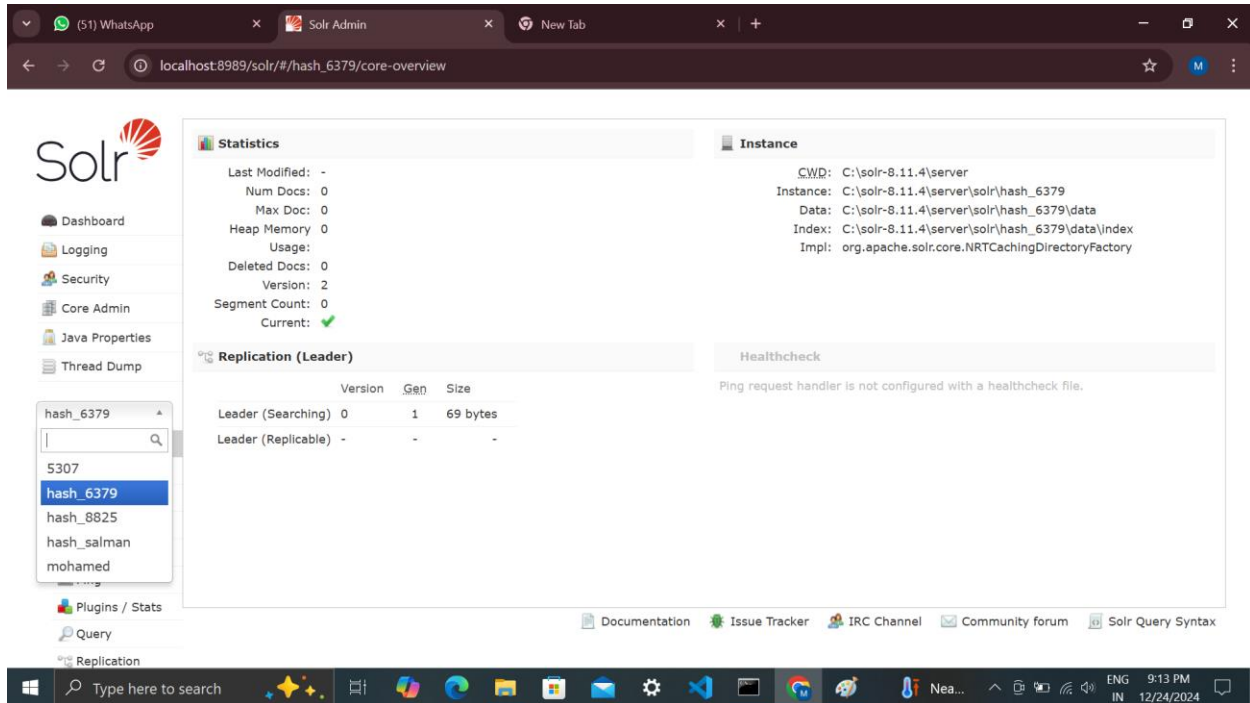
The screenshot shows the Solr Admin web interface in a browser. The address bar indicates the URL is `localhost:8989/solr/#/hash_salman/core-overview`. The interface includes a sidebar with navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, and Thread Dump. The main content area is divided into several sections:

- Statistics:** Displays core statistics including Last Modified (28 minutes ago), Num Docs (1262), Max Doc (1262), Heap Memory (4852), Usage, Deleted Docs (0), Version (8), Segment Count (1), and Current status (green checkmark).
- Instance:** Shows instance details: CWD (C:\solr-8.11.4\server), Instance (C:\solr-8.11.4\server\solr\hash\_salman), Data (C:\solr-8.11.4\server\solr\hash\_salman\data), Index (C:\solr-8.11.4\server\solr\hash\_salman\data\index), and Impl (org.apache.solr.core.NRTCachingDirectoryFactory).
- Replication (Leader):** A table showing replication details for the leader node.
- Healthcheck:** A message stating "Ping request handler is not configured with a healthcheck file."

A search dropdown on the left shows a list of cores: hash\_salman, 5307, hash\_6379, hash\_8825, hash\_salman (highlighted), and mohamed. The Windows taskbar at the bottom shows the time as 9:12 PM on 12/24/2024.

	Version	Gen	Size
Leader (Searching)	1735053276069	3	427.62 KB
Leader (Replicable)	-	-	-

d) createCollection(v\_phoneCollection)



The screenshot shows the Solr Admin web interface for a different core. The address bar indicates the URL is `localhost:8989/solr/#/hash_6379/core-overview`. The interface structure is identical to the previous one, but the data reflects the state of the 'hash\_6379' core:

- Statistics:** Last Modified is '-', Num Docs (0), Max Doc (0), Heap Memory (0), Usage, Deleted Docs (0), Version (2), Segment Count (0), and Current status (green checkmark).
- Instance:** CWD (C:\solr-8.11.4\server), Instance (C:\solr-8.11.4\server\solr\hash\_6379), Data (C:\solr-8.11.4\server\solr\hash\_6379\data), Index (C:\solr-8.11.4\server\solr\hash\_6379\data\index), and Impl (org.apache.solr.core.NRTCachingDirectoryFactory).
- Replication (Leader):** A table showing replication details for the leader node.
- Healthcheck:** A message stating "Ping request handler is not configured with a healthcheck file."

The search dropdown on the left shows a list of cores: hash\_6379, 5307, hash\_6379 (highlighted), hash\_8825, hash\_salman, and mohamed. The Windows taskbar at the bottom shows the time as 9:13 PM on 12/24/2024.

	Version	Gen	Size
Leader (Searching)	0	1	69 bytes
Leader (Replicable)	-	-	-

e) getEmpCount(v\_nameCollection)

The screenshot displays the Solr Admin web interface. On the left, a sidebar contains navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, Thread Dump, and a dropdown menu for the 'hash\_salman' index with options for Overview, Analysis, Dataimport, Documents, Files, Ping, Plugins / Stats, Query (selected), and Replication. The main area is titled 'Request-Handler (qt)' and shows the path '/select'. Below this, the query parameters are configured: 'q' is set to '\*:\*', 'q.op' is set to 'OR', and 'indent' is checked under the 'wt' (wrapper type) section. The 'sort' field is empty, and 'start, rows' is set to 0, 10. The URL bar at the top shows the full request: 'http://localhost:8989/solr/#/hash\_salman/query?q=\*:\*&q.op=OR&indent=true'. The response is displayed in a JSON format, showing a single document with the following fields: Department: Engineering, Gender: Male, Ethnicity: Asian, Age: 47, Country: United States, City: Columbus, ID: b394e96f-83a9-4b22-a579-fff733415208, Employee\_ID: E02002, Full\_Name: Kai Le, Job\_Title: Controls Engineer, Business\_Unit: Manufacturing, Hire\_Date: 2/5/2022, Annual\_Salary: \$92,368, Bonus: 0%, and \_version\_: 1819333684351729664.

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 3,
    "params": {
      "q": "*:*",
      "indent": "true",
      "q.op": "OR",
      "_": "1735051950446"
    }
  },
  "response": {
    "numFound": 1262,
    "start": 0,
    "numFoundExact": true,
    "docs": [
      {
        "Department": "Engineering",
        "Gender": "Male",
        "Ethnicity": "Asian",
        "Age": 47,
        "Country": "United States",
        "City": "Columbus",
        "id": "b394e96f-83a9-4b22-a579-fff733415208",
        "Employee_ID": "E02002",
        "Full_Name": "Kai Le",
        "Job_Title": "Controls Engineer",
        "Business_Unit": "Manufacturing",
        "Hire_Date": "2/5/2022",
        "Annual_Salary": "$92,368 ",
        "Bonus__": "0%",
        "_version_": 1819333684351729664
      }
    ]
  }
}
```

f) indexData(v\_nameCollection,'Department')

The screenshot shows the Solr Admin web interface. The left sidebar contains navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, Thread Dump, hash\_salman (selected), Overview, Analysis, Dataimport, Documents, Files, Ping, Plugins / Stats, Query, and Replication. The main panel is titled 'Request-Handler (qt)' and shows the following fields: /select, common, q (id:5cfe44ff-14cb-43df-91f0-03d114945e6a), q.op (OR), fq, sort, start, rows (0 to 10), fi, df, wt, and indent on (checked). The URL bar shows: http://localhost:8989/solr/#/hash\_salman/query?q=id:5cfe44ff-14cb-43df-91f0-03d114945e6a&q.op=OR&indent=true. The response is a JSON object with a status of 0, QTime of 3, and a response containing a single document with Department: Accounting, Human Resources, Marketing, Sales, and id: 5cfe44ff-14cb-43df-91f0-03d114945e6a.

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 3,
    "params": {
      "q": "id:5cfe44ff-14cb-43df-91f0-03d114945e6a",
      "indent": "true",
      "q.op": "OR",
      "_": "1735056280740"
    }
  },
  "response": {
    "numFound": 1, "start": 0, "numFoundExact": true, "docs": [
      {
        "Department": "Accounting",
        "Human Resources",
        "Marketing",
        "Sales",
        "id": "5cfe44ff-14cb-43df-91f0-03d114945e6a",
        "_version_": 1819337497737428992
      }
    ]
  }
}
```

g) indexData(v\_phoneCollection, 'Gender')

The screenshot shows the Solr Admin web interface. The left sidebar contains navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, Thread Dump, hash\_salman (selected), Overview, Analysis, Dataimport, Documents, Files, Ping, Plugins / Stats, Query, and Replication. The main panel is titled 'Request-Handler (qt)' and shows the following fields: /select, common, q (Gender:(Male OR Female)), q.op (OR), fq, sort, start, rows (0 to 10), fi, df, wt, and indent on (checked). The URL bar shows: http://localhost:8989/solr/#/hash\_salman/query?q=Gender:(Male%20OR%20Female)&q.op=OR&indent=true. The response is a JSON object with a status of 0, QTime of 1, and a response containing a single document with Department: Engineering, Gender: Male, Ethnicity: Asian, Age: 47, Country: United States, City: Columbus, id: b394e96f-83a9-4b22-a579-fff733415208, Employee\_ID: E02002, Full\_Name: Kai Le, Job\_Title: Controls Engineer, Business\_Unit: Manufacturing, Hire\_Date: 2/5/2022, Annual\_Salary: \$92,368, Bonus: 0%, and \_version\_: 1819333684351729664.

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 1,
    "params": {
      "q": "Gender:(Male OR Female)",
      "indent": "true",
      "q.op": "OR",
      "_": "1735056280740"
    }
  },
  "response": {
    "numFound": 1213, "start": 0, "numFoundExact": true, "docs": [
      {
        "Department": "Engineering",
        "Gender": "Male",
        "Ethnicity": "Asian",
        "Age": 47,
        "Country": "United States",
        "City": "Columbus",
        "id": "b394e96f-83a9-4b22-a579-fff733415208",
        "Employee_ID": "E02002",
        "Full_Name": "Kai Le",
        "Job_Title": "Controls Engineer",
        "Business_Unit": "Manufacturing",
        "Hire_Date": "2/5/2022",
        "Annual_Salary": "$92,368 ",
        "Bonus": "0%",
        "_version_": 1819333684351729664
      }
    ]
  }
}
```

h) getEmpCount(v\_nameCollection)

The screenshot shows the Solr Admin web interface. The left sidebar contains navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, Thread Dump, hash\_salman (selected), Overview, Analysis, Dataimport, Documents, Files, Ping, Plugins / Stats, Query (selected), and Replication. The main content area is divided into two panels. The left panel, titled 'Request-Handler (qt)', shows the query configuration: `/select`, `q:*`, `q.op:OR`, `fq:`, `sort:`, `start, rows: 0 10`, `fl:`, `df:`, `wt:-----`, and `indent on` checked. The right panel shows the HTTP request and response. The request is `http://localhost:8989/solr/hash_salman/select?indent=true&q.op=OR&q=%3A*`. The response is a JSON object with a status of 0, QTime of 3, and a response containing a single document with employee details.

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 3,
    "params": {
      "q": "*",
      "indent": "true",
      "q.op": "OR",
      "_": "1735051950446"
    }
  },
  "response": {
    "numFound": 1262,
    "start": 0,
    "numFoundExact": true,
    "docs": [
      {
        "Department": "Engineering",
        "Gender": "Male",
        "Ethnicity": "Asian",
        "Age": 47,
        "Country": "United States",
        "City": "Columbus",
        "id": "b394e96f-83a9-4b22-a579-fff733415208",
        "Employee_ID": "E02002",
        "Full_Name": "Kai Le",
        "Job_Title": "Controls Engineer",
        "Business_Unit": "Manufacturing",
        "Hire_Date": "2/5/2022",
        "Annual_Salary": "$92,368 ",
        "Bonus": "0%",
        "_version_": 1819333684351729664
      }
    ]
  }
}
```

i) delEmpById (v\_nameCollection , 'E02003')

The screenshot shows the Solr Admin web interface. The left sidebar is the same as in the previous screenshot. The main content area shows the query configuration in the 'Request-Handler (qt)' panel: `/select`, `q:id:E02002`, `q.op:OR`, `fq:`, `sort:`, `start, rows: 0 10`, `fl:`, `df:`, `wt:-----`, and `indent on` checked. The right panel shows the HTTP request and response. The request is `http://localhost:8989/solr/hash_salman/select?indent=true&q.op=OR&q=id%3AE02002`. The response is a JSON object with a status of 0, QTime of 3, and a response containing an empty array of documents.

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 3,
    "params": {
      "q": "id:E02002",
      "indent": "true",
      "q.op": "OR",
      "_": "1735051950446"
    }
  },
  "response": {
    "numFound": 0,
    "start": 0,
    "numFoundExact": true,
    "docs": []
  }
}
```



Solr

Dashboard

Logging

Security

Core Admin

Java Properties

Thread Dump

hash\_salman

Overview

Analysis

Dataimport

Documents

Files

Ping

Plugins / Stats

Query

Replication

Request-Handler (qt)

/select

— common

q

\*:\*

q.op

OR

fq

sort

start, rows

0

10

fl

df

wt

-----

☒ indent on

http://localhost:8989/solr/hash\_salman/select?indent=true&q.op=OR&q=\*&q.op=OR&indent=true

```
{
  "responseHeader": {
    "status": 0,
    "QTime": 3,
    "params": {
      "q": "": "",
      "indent": "true",
      "q.op": "OR",
      "_: "a735051950446"}},
  "response": {
    "numFound": 1262, "start": 0, "numFoundExact": true, "docs": [
      {
        "Department": ["Engineering"],
        "Gender": ["Male"],
        "Ethnicity": ["Asian"],
        "Age": [47],
        "Country": ["United States"],
        "city": ["Columbus"],
        "id": ["b394e96f-83a9-4b22-a579-fff733415208"],
        "Employee_ID": ["E02002"],
        "Full_Name": ["Kai Le"],
        "Job_Title": ["Controls Engineer"],
        "Business_Unit": ["Manufacturing"],
        "Hire_Date": ["2/5/2022"],
        "Annual_Salary": ["$92,368 "],
        "Bonus_": ["0%"],
        "_version_": 1819333684351729664,

```

l) searchByColumn(v\_nameCollection,'Gender','Male')

The screenshot shows the Solr Admin web interface. The browser address bar displays the URL: `localhost:8989/solr/#/hash_salman/query?q=Gender:Male&q.op=OR&indent=true`. The left sidebar contains navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, Thread Dump, and a dropdown menu for 'hash\_salman' with options: Overview, Analysis, Dataimport, Documents, Files, Ping, Plugins / Stats, Query (selected), and Replication. The main content area is divided into two panels. The left panel, titled 'Request-Handler (qt)', shows the query configuration: `/select`, `common`, `q: Gender:Male`, `q.op: OR`, `fq:`, `sort:`, `start, rows: 0 10`, `fl:`, `df:`, `wt:`, and `indent on` (checked). The right panel displays the JSON response from the query, with the URL `http://localhost:8989/solr/hash_salman/select?indent=true&q.op=OR&q=Gender%3AMale`. The response includes a status of 0, a time of 3, and a list of documents. The first document is for an employee named Kai Le, with details such as Department: Engineering, Gender: Male, Ethnicity: Asian, Age: 47, Country: United States, City: Columbus, ID: b394e96f-83a9-4b22-a579-fff733415208, Employee\_ID: E02002, Full\_Name: Kai Le, Job\_Title: Controls Engineer, Business\_Unit: Manufacturing, Hire\_Date: 2/5/2022, Annual\_Salary: \$92,368, Bonus: 0%, and Version: 1819333684351729664.

m) searchByColumn(v\_phoneCollection,'Department','IT')

The screenshot shows the Solr Admin web interface. The browser address bar displays the URL: `localhost:8989/solr/#/hash_6379/query?q=Department:IT&q.op=OR&indent=true`. The left sidebar is identical to the previous screenshot, with the 'Query' option selected. The main content area shows an error response. The left panel, titled 'Request-Handler (qt)', shows the query configuration: `/select`, `common`, `q: Department:IT`, `q.op: OR`, `fq:`, `sort:`, `start, rows: 0 10`, `fl:`, `df:`, `wt:`, and `indent on` (checked). The right panel displays the JSON response, with the URL `http://localhost:8989/solr/hash_6379/select?indent=true&q.op=OR&q=Department%3AIT`. The response includes a status of 400, a time of 1, and an error message: "undefined field Department". The error details are: `"error": {"metadata": {"error-class": "org.apache.solr.common.SolrException", "root-error-class": "org.apache.solr.common.SolrException", "msg": "undefined field Department", "code": 400}}`.

n) getDepFacet(v\_nameCollection)

The screenshot shows the Solr Admin web interface in a browser. The address bar displays the URL: `localhost:8989/solr/#/hash_salman/query?q=*:*&q.op=OR&indent=true&facet=true`. The left sidebar contains navigation links: Dashboard, Logging, Security, Core Admin, Java Properties, Thread Dump, and a dropdown menu for 'hash\_salman' with options: Overview, Analysis, Dataimport, Documents, Files, Ping, Plugins / Stats, and Query. The main content area displays a JSON response from the query. The response includes a list of documents with fields like Hire\_Date, Annual\_Salary, Bonus, \_version\_, Department, Gender, Ethnicity, Age, Country, City, id, Employee\_ID, Full\_Name, Job\_Title, Business\_Unit, and a facet\_counts section. The facet\_counts section shows facet\_queries, facet\_fields, facet\_ranges, facet\_intervals, and facet\_heatmaps. The bottom of the browser shows the Windows taskbar with various application icons and system tray information.

```
{
  "Hire_Date": ["9/9/2011"],
  "Annual_Salary": ["$97,630 "],
  "Bonus__": ["0%"],
  "_version_": "1819333684574027776",
  {
    "Department": ["Finance"],
    "Gender": ["Male"],
    "Ethnicity": ["Caucasian"],
    "Age": [52],
    "Country": ["United States"],
    "City": ["Miami"],
    "id": "b152f5a7-d6fa-4185-969b-375b2bc9e0d5",
    "Employee_ID": ["E02011"],
    "Full_Name": ["Jameson Thomas"],
    "Job_Title": ["Manager"],
    "Business_Unit": ["Specialty Products"],
    "Hire_Date": ["2/5/2015"],
    "Annual_Salary": ["$105,879 "],
    "Bonus__": ["10%"],
    "_version_": "1819333684576124928"
  }
},
"facet_counts": {
  "facet_queries": {},
  "facet_fields": {},
  "facet_ranges": {},
  "facet_intervals": {},
  "facet_heatmaps": {}
}
```

o) getDepFacet(v\_phoneCollection)

The screenshot shows the Solr Admin web interface in a browser. The address bar displays the URL: `localhost:8989/solr/#/hash_salman/query?q=*:*&q.op=OR&indent=true&facet=true&facet.field=Department`. The left sidebar is similar to the previous screenshot, but the 'hash\_salman' dropdown menu is expanded, showing a search bar and a list of suggestions: 5307, hash\_6379, hash\_8825, hash\_salman, and mohamed. The main content area displays a JSON response from the query. The response includes a list of documents with fields like Country, City, id, Employee\_ID, Full\_Name, Job\_Title, Business\_Unit, Hire\_Date, Annual\_Salary, Bonus, \_version\_, and a facet\_counts section. The facet\_counts section shows facet\_queries, facet\_fields, and facet\_ranges. The facet\_ranges section shows a list of departments with their counts: it (347), sales (189), engineering (159), marketing (137), accounting (133), finance (129), human (125), and resources (125). The bottom of the browser shows the Windows taskbar with various application icons and system tray information.

```
{
  "Country": ["United States"],
  "City": ["Miami"],
  "id": "b152f5a7-d6fa-4185-969b-375b2bc9e0d5",
  "Employee_ID": ["E02011"],
  "Full_Name": ["Jameson Thomas"],
  "Job_Title": ["Manager"],
  "Business_Unit": ["Specialty Products"],
  "Hire_Date": ["2/5/2015"],
  "Annual_Salary": ["$105,879 "],
  "Bonus__": ["10%"],
  "_version_": "1819333684576124928"
},
"facet_counts": {
  "facet_queries": {},
  "facet_fields": {
    "Department": [
      "it", 347,
      "sales", 189,
      "engineering", 159,
      "marketing", 137,
      "accounting", 133,
      "finance", 129,
      "human", 125,
      "resources", 125
    ]
  },
  "facet_ranges": {},
  "facet_intervals": {},
  "facet_heatmaps": {}
}
```