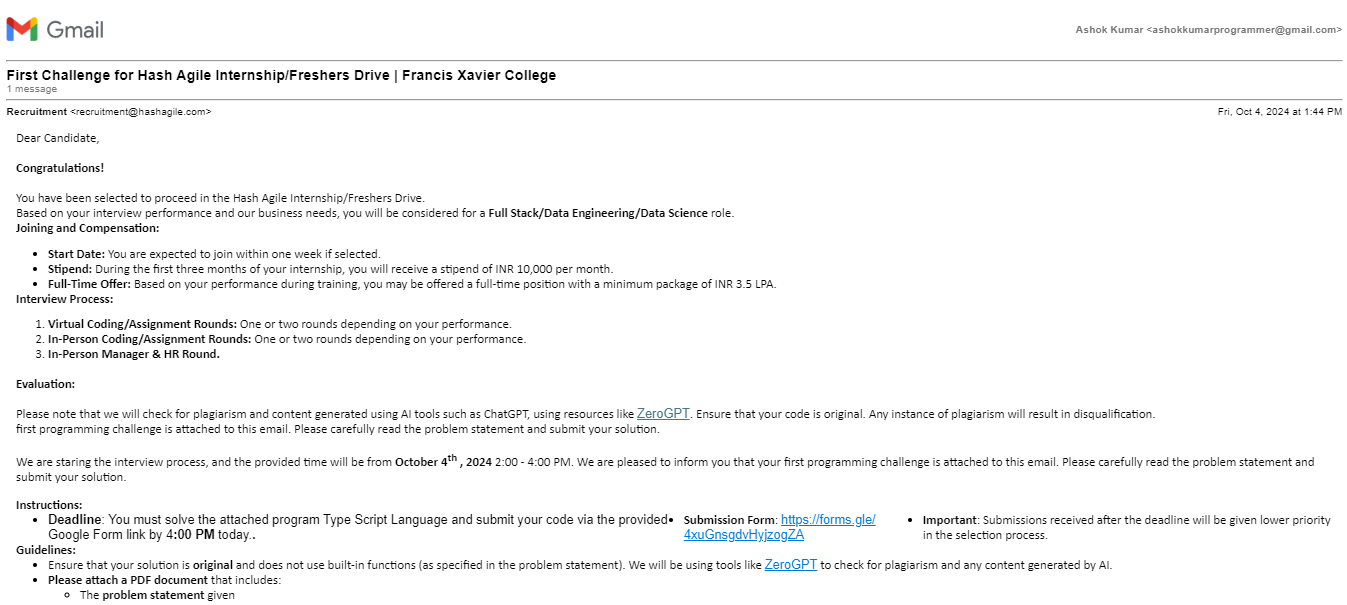
**Full Name:** Ashok Kumar A

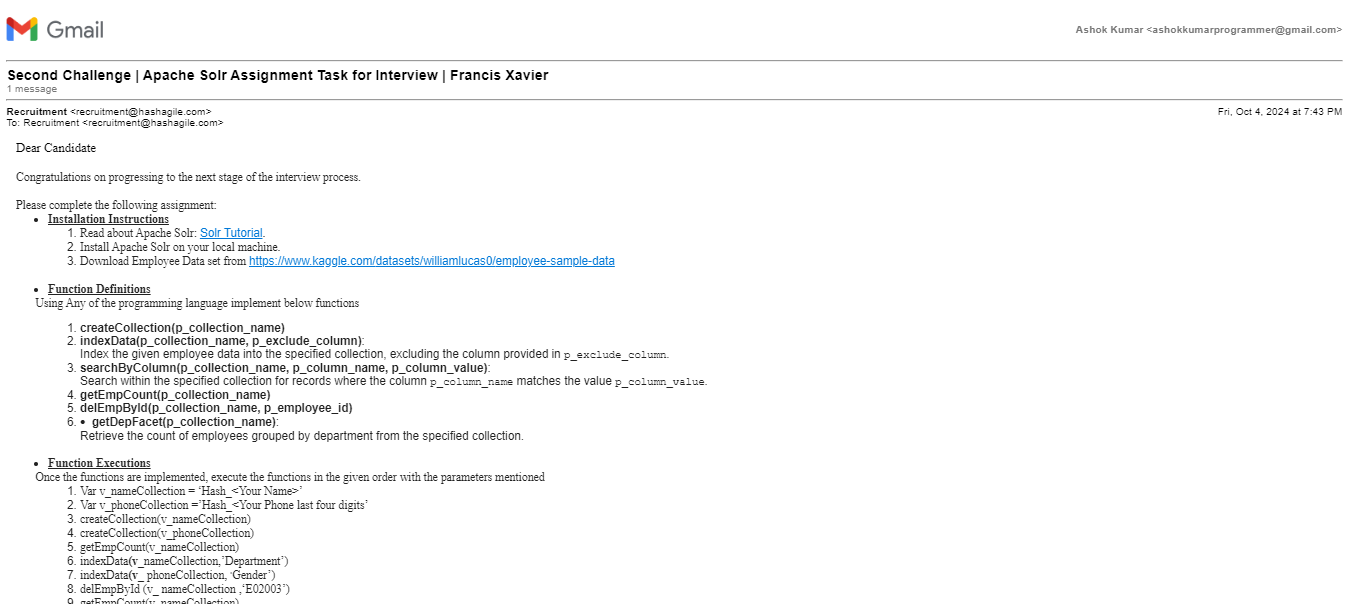
**Selfie Pic:**

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**First Task Email Screenshot:**



**Second Task Email Screenshot:**



**GitHub URL for Round 1:**

https://github.com/Ashokkumar-Programmer/HAT-Interview/tree/main/Round1

**GitHub URL for Assignment:**

<https://github.com/Ashokkumar-Programmer/HAT-Interview/tree/main/Round2>

**Program Coding:**

import pysolr

import requests

import csv

def createCollection(collection\_name):

url= f'http://localhost:8983/solr/admin/collections?action=CREATE&name={collection\_name}&numShards=1&replicationFactor=1'

response = requests.get(url)

if response.status\_code == 200:

print(f"Collection '{collection\_name}' created successfully.")

else:

print(f"Failed to create collection '{collection\_name}'. Response: {response.content}")

def indexData(collection\_name, exclude\_column):

url = f'http://localhost:8983/solr/{collection\_name}'

solr = pysolr.Solr(url, always\_commit=True)

encodings\_to\_try = ['utf-8', 'ISO-8859-1', 'windows-1252']

documents = []

for encoding in encodings\_to\_try:

try:

with open('EmployeeData.csv', mode='r', encoding=encoding, errors='replace') as file:

reader = csv.DictReader(file)

for row in reader:

documents.append(row)

break

except UnicodeDecodeError as e:

print(f"Failed to read with encoding {encoding}: {e}")

except FileNotFoundError:

print("CSV file not found. Please check the file path.")

return

except Exception as e:

print(f"An error occurred: {e}")

if documents:

try:

solr.add(documents)

print(f"Indexed {len(documents)} documents into {collection\_name}.")

except pysolr.SolrError as e:

print(f"Failed to index documents in Solr: {e}")

except Exception as e:

print(f"Unexpected error while indexing: {e}")

else:

print("No documents were indexed.")

def searchByColumn(collection\_name, column\_name, column\_value):

url = f'http://localhost:8983/solr/{collection\_name}'

solr = pysolr.Solr(url, always\_commit=True)

query = f'{column\_name}:"{column\_value}"'

try:

results = solr.search(query)

return results

except pysolr.SolrError as e:

print(f"Solr Error: {e}")

def getEmpCount(collection\_name):

url = f'http://localhost:8983/solr/{collection\_name}'

solr = pysolr.Solr(url, always\_commit=True)

results = solr.search('\*:\*', \*\*{'rows': 0})

count = results.hits

print(f"Total employees in '{collection\_name}': {count}")

return count

def delEmpById(collection\_name, employee\_id):

url = f'http://localhost:8983/solr/{collection\_name}'

solr = pysolr.Solr(url, always\_commit=True)

solr.delete(id=employee\_id)

print(f"Deleted employee with ID: {employee\_id}")

def getDepFacet(collection\_name):

url = f'http://localhost:8983/solr/{collection\_name}'

solr = pysolr.Solr(url, always\_commit=True)

try:

facet\_query = solr.search('\*:\*', \*\*{

'facet': 'true',

'facet.field': 'Department',

'rows': 0

})

print(f"Facet response: {facet\_query}")

except pysolr.SolrError as e:

print(f"Solr responded with an error (HTTP 400): {e}")

except Exception as e:

print(f"Unexpected error while getting facets: {e}")

v\_nameCollection = 'Hash\_AshokKumar'

v\_phoneCollection = 'Hash\_8843'

print("\n\nCollection Creation")

createCollection(v\_nameCollection)

createCollection(v\_phoneCollection)

print("\n\nIndexing Data into collections")

indexData(v\_nameCollection, 'Department')

indexData(v\_phoneCollection, 'Gender')

print("\n\nEmployee Count of Hash\_AshokKumar")

getEmpCount(v\_nameCollection)

print("\n\nDelete E02003 from Hash\_AshokKumar")

delEmpById(v\_nameCollection, 'E02003')

print("\n\nSearch Department column in Hash\_AshokKumar")

results = searchByColumn(v\_nameCollection, 'Department', 'IT')

if results:

print(f"Search results in '{v\_nameCollection}' for Department 'IT': {len(results)} found.")

for result in results:

print(result)

print("\n\nSearch Gender column in Hash\_AshokKumar")

results = searchByColumn(v\_nameCollection, 'Gender', 'Male')

if results:

print(f"Search results in '{v\_nameCollection}' for Gender 'Male': {len(results)} found.")

for result in results:

print(result)

print("\n\nSearch Department column in Hash\_8843")

results = searchByColumn(v\_phoneCollection, 'Department', 'IT')

if results:

print(f"Search results in '{v\_phoneCollection}' for Department 'IT': {len(results)} found.")

for result in results:

print(result)

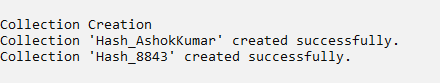
print("\n\nGetting Department Facet of collections")

getDepFacet(v\_nameCollection)

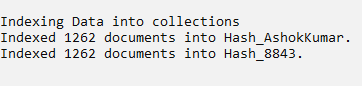
getDepFacet(v\_phoneCollection)

**Function Execution Results:**

1. **Creating Collections:**



1. **Indexing Data into collections:**



1. **Employee Count of Hash\_AshokKumar:**



1. **Delete E02003 from Hash\_AshokKumar:**



1. **Search Department column in Hash\_AshokKumar:**



1. **Search Gender column in Hash\_AshokKumar:**

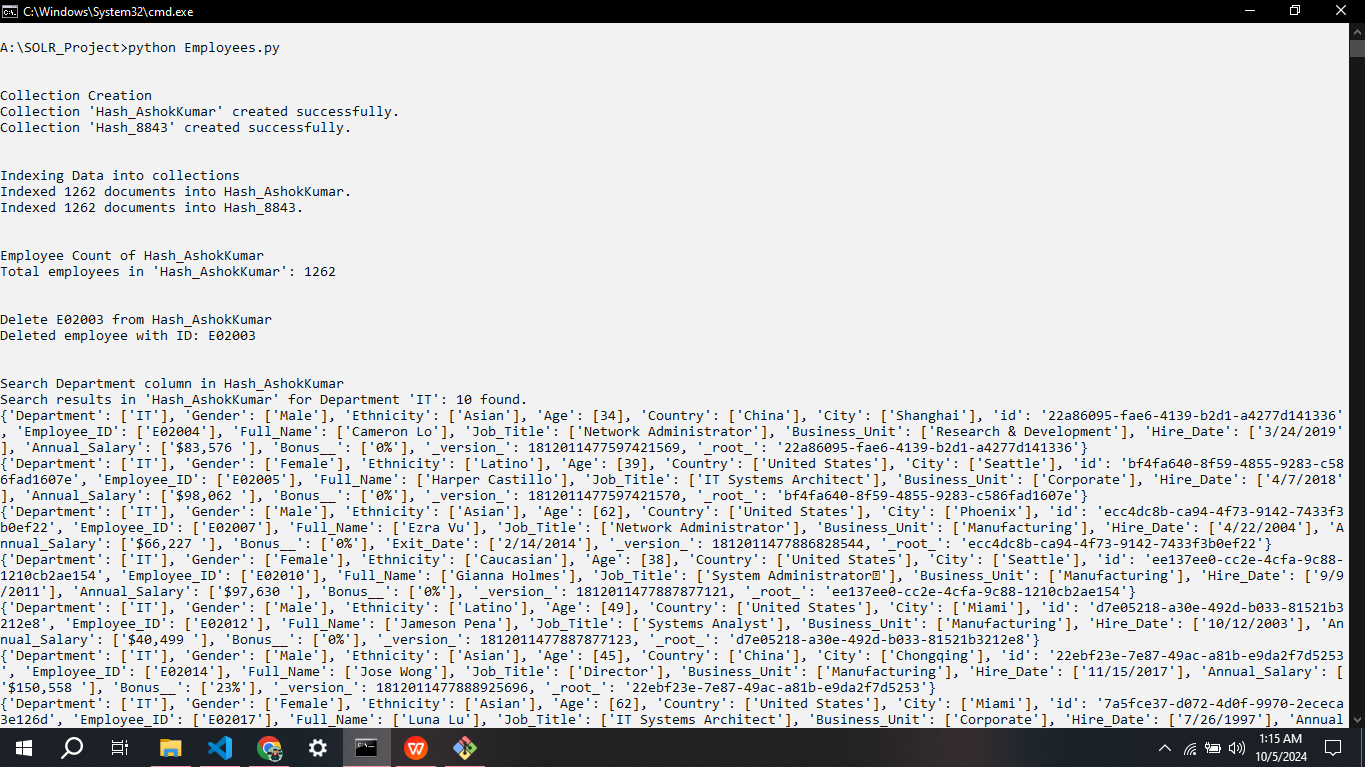


1. **Search Department column in Hash\_8843:**



1. **Getting Department Facet from collections:**



**Full Screen:**