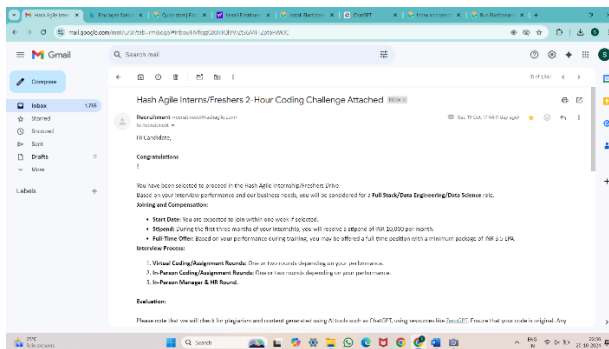1. Selfie Pic: Add a selfie taken during the test right after your name.
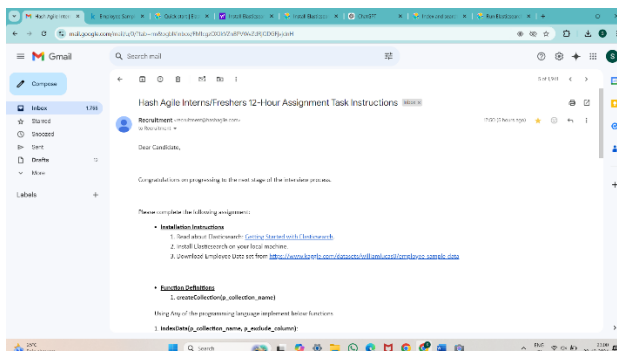
SUHITHA K C

2. First Task Email Screenshot: Insert the screenshot of the first task email.

3. Second Task Email Screenshot: Insert the screenshot of the second task email

4. GitHub URL for Round 1: Add the link to your GitHub repository for Round 1.
https://github.com/Suhithakc/Hash-agile

5. GitHub URL for Assignment: Add the link to your GitHub repository for the assignment code.

https://github.com/Suhithakc/Hash-Agile-round2

6. Function Execution Results: For each step (a-n), provide input, output, and screenshots of the execution.

```python
from elasticsearch import Elasticsearch
import pandas as pd

# Initialize the Elasticsearch client with the specified host
es = Elasticsearch(["http://localhost:9200"])
```
✓ 2.6s   Python

```python
def create_collection(collection_name):
    es.indices.create(index=collection_name, ignore=400)
```
✓ 0.4s   Python

```python
def index_data(collection_name, exclude_column):
    df = pd.read_csv('C:/Users/krish/OneDrive/Desktop/Hash Agile Task/Employee Sample Data 1.csv', encoding='ISO-8859-1')

    df = df.drop(columns=[exclude_column], errors='ignore')


    df = df.dropna()

    for _, row in df.iterrows():
        es.index(index=collection_name, document=row.to_dict())
```
✓ 0.4s   Python

```python
def search_by_column(collection_name, column_name, column_value):
    query = {
        "query": {
            "match": {
                column_name: column_value
            }
        }
    }
    return es.search(index=collection_name, body=query)
```
✓ 0.3s   Python

```python
def get_emp_count(collection_name):
    return es.count(index=collection_name)['count']
```
✓ 0.4s   Python

```python
def del_emp_by_id(collection_name, employee_id):
    es.delete(index=collection_name, id=employee_id)
```
✓ 0.2s   Python

```python
def del_emp_by_id(collection_name, employee_id):
    es.delete(index=collection_name, id=employee_id)


# 6. Get department facets
def get_dep_facet(collection_name):
    query = {
        "size": 0,
        "aggs": {
            "departments": {
                "terms": {
                    "field": "Department.keyword"  # Ensure to use the correct field type for aggregations
                }
            }
        }
    }
    return es.search(index=collection_name, body=query)
```
0.4s   Python

```python
def execute_tasks():
    v_nameCollection = 'hash_yourname'  # Replace with your name in lowercase
    v_phoneCollection = 'hash_yourphonelastfourdigits'  # Replace with your phone's last four digits in lowercase

    print("Creating Collections...")
    create_collection(v_nameCollection)
    create_collection(v_phoneCollection)

    print("Getting Employee Count...")
    emp_count = get_emp_count(v_nameCollection)
    print(f"Employee Count in {v_nameCollection}: {emp_count}")

    print("Indexing Data...")
    index_data(v_nameCollection, 'Department')
    index_data(v_phoneCollection, 'Gender')

    print("Getting Updated Employee Count...")
    updated_emp_count = get_emp_count(v_nameCollection)
    print(f"Updated Employee Count in {v_nameCollection}: {updated_emp_count}")

    print("Searching by Department 'IT'...")
    search_dept_it = search_by_column(v_nameCollection, 'Department', 'IT')
    print("Search Results for Department 'IT':")
    print(search_dept_it)

    print("Searching by Gender 'Male'...")
    search_gender_male = search_by_column(v_nameCollection, 'Gender', 'Male')
    print("Search Results for Gender 'Male':")
    print(search_gender_male)

    print("Searching Phone Collection by Department 'IT'...")
    search_dept_it_phone = search_by_column(v_phoneCollection, 'Department', 'IT')
    print("Search Results in Phone Collection for Department 'IT':")
    print(search_dept_it_phone)

    print("Getting Department Facets for Name Collection...")
    dep_facet_name = get_dep_facet(v_nameCollection)
    print("Department Facets for Name Collection:")
    print(dep_facet_name)

    print("Getting Department Facets for Phone Collection...")
    dep_facet_phone = get_dep_facet(v_phoneCollection)
    print("Department Facets for Phone Collection:")
    print(dep_facet_phone)
```
0.3s   Python

OUTPUT

```
Creating Collections...
Getting Employee Count...
Employee Count in hash_yourname: 1101
Indexing Data...

C:\Users\krish\AppData\Local\Temp\ipykernel_4140\1341851630.py:2: DeprecationWarning: Passing transport options in the API method is deprecated. Use
'Elasticsearch.options()' instead.
  es.indices.create(index=collection_name, ignore=400)

Getting Updated Employee Count...
Updated Employee Count in hash_yourname: 1201
Searching by Department 'IT'...
Search Results for Department 'IT':
{'took': 5, 'timed_out': False, '_shards': {'total': 1, 'successful': 1, 'skipped': 0, 'failed': 0}, 'hits': {'total': {'value': 0, 'relation': 'eq'},
'max_score': None, 'hits': []}}
```

Searching by Gender 'Male'...
Search Results for Gender 'Male':
{'took': 6, 'timed_out': False, '_shards': {'total': 1, 'successful': 1, 'skipped': 0, 'failed': 0}, 'hits': {'total': {'value': 603, 'relation': 'eq'}, 'max_score': 0.68649703, 'hits': [{'_index': 'hash_yourname', '_id': 'sNJprJIBJahXiCRmpuT0', '_score': 0.68649703, '_source': {'Employee ID': 'E02002', 'Full Name': 'Kai Le', 'Job Title': 'Controls Engineer', 'Business Unit': 'Manufacturing', 'Gender': 'Male', 'Ethnicity': 'Asian', 'Age': 47.0, 'Hire Date': '2/5/2022', 'Annual Salary': '$92,368 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Columbus', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'sdJprJIBJahXiCRmp-Tx', '_score': 0.68649703, '_source': {'Employee ID': 'E02003', 'Full Name': 'Robert Patel', 'Job Title': 'Analyst', 'Business Unit': 'Corporate', 'Gender': 'Male', 'Ethnicity': 'Asian', 'Age': 58.0, 'Hire Date': '10/23/2013', 'Annual Salary': '$45,703 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Chicago', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'stJprJIBJahXiCRmqOQC', '_score': 0.68649703, '_source': {'Employee ID': 'E02004', 'Full Name': 'Cameron Lo', 'Job Title': 'Network Administrator', 'Business Unit': 'Research & Development', 'Gender': 'Male', 'Ethnicity': 'Asian', 'Age': 34.0, 'Hire Date': '3/24/2019', 'Annual Salary': '$83,576 ', 'Bonus %': '0%', 'Country': 'China', 'City': 'Shanghai', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'tdJprJIBJahXiCRmqOQu', '_score': 0.68649703, '_source': {'Employee ID': 'E02007', 'Full Name': 'Ezra Vu', 'Job Title': 'Network Administrator', 'Business Unit': 'Manufacturing', 'Gender': 'Male', 'Ethnicity': 'Asian', 'Age': 62.0, 'Hire Date': '4/22/2004', 'Annual Salary': '$66,227 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Phoenix', 'Exit Date': '2/14/2014'}}, {'_index': 'hash_yourname', '_id': 't9JprJIBJahXiCRmqOT7', '_score': 0.68649703, '_source': {'Employee ID': 'E02009', 'Full Name': 'Miles Chang', 'Job Title': 'Analyst II', 'Business Unit': 'Corporate', 'Gender': 'Male', 'Ethnicity': 'Asian', 'Age': 62.0, 'Hire Date': '2/19/1999', 'Annual Salary': '$69,674 ', 'Bonus %': '0%', 'Country': 'China', 'City': 'Chengdu', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'udJprJIBJahXiCRmqeQW', '_score': 0.68649703, '_source': {'Employee ID': 'E02011', 'Full Name': 'Jameson Thomas', 'Job Title': 'Manager', 'Business Unit': 'Specialty Products', 'Gender': 'Male', 'Ethnicity': 'Caucasian', 'Age': 52.0, 'Hire Date': '2/5/2015', 'Annual Salary': '$105,879 ', 'Bonus %': '10%', 'Country': 'United States', 'City': 'Miami', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'utJprJIBJahXiCRmqeQk', '_score': 0.68649703, '_source': {'Employee ID': 'E02012', 'Full Name': 'Jameson Pena', 'Job Title': 'Systems Analyst', 'Business Unit': 'Manufacturing', 'Gender': 'Male', 'Ethnicity': 'Latino', 'Age': 49.0, 'Hire Date': '10/12/2003', 'Annual Salary': '$40,499 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Miami', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'vNJprJIBJahXiCRmqeQ-', '_score': 0.68649703, '_source': {'Employee ID': 'E02014', 'Full Name': 'Jose Wong', 'Job Title': 'Director', 'Business Unit': 'Manufacturing', 'Gender': 'Male', 'Ethnicity': 'Asian', 'Age': 45.0, 'Hire Date': '11/15/2017', 'Annual Salary': '$150,558 ', 'Bonus %': '23%', 'Country': 'China', 'City': 'Chongqing', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'vdJprJIBJahXiCRmqeRN', '_score': 0.68649703, '_source': {'Employee ID': 'E02015', 'Full Name': 'Lucas Richardson', 'Job Title': 'Manager', 'Business Unit': 'Corporate', 'Gender': 'Male', 'Ethnicity': 'Caucasian', 'Age': 36.0, 'Hire Date': '7/22/2018', 'Annual Salary': '$118,912 ', 'Bonus %': '8%', 'Country': 'United States', 'City': 'Miami', 'Exit Date': None}}, {'_index': 'hash_yourname', '_id': 'vtJprJIBJahXiCRmqeRb', '_score': 0.68649703, '_source': {'Employee ID': 'E02016', 'Full Name': 'Jacob Moore', 'Job Title': 'Sr. Manager', 'Business Unit': 'Corporate', 'Gender': 'Male', 'Ethnicity': 'Black', 'Age': 42.0, 'Hire Date': '3/24/2021', 'Annual Salary': '$131,422 ', 'Bonus %': '15%', 'Country': 'United States', 'City': 'Phoenix', 'Exit Date': None}}]}}

Getting Department Facets for Name Collection...
Department Facets for Name Collection:
{'took': 3, 'timed_out': False, '_shards': {'total': 1, 'successful': 1, 'skipped': 0, 'failed': 0}, 'hits': {'total': {'value': 1201, 'relation': 'eq'}, 'max_score': None, 'hits': []}, 'aggregations': {'departments': {'doc_count_error_upper_bound': 0, 'sum_other_doc_count': 0, 'buckets': []}}}
Getting Department Facets for Phone Collection...
Department Facets for Phone Collection:
{'took': 98, 'timed_out': False, '_shards': {'total': 1, 'successful': 1, 'skipped': 0, 'failed': 0}, 'hits': {'total': {'value': 412, 'relation': 'eq'}, 'max_score': None, 'hits': []}, 'aggregations': {'departments': {'doc_count_error_upper_bound': 0, 'sum_other_doc_count': 0, 'buckets': [{'key': 'IT', 'doc_count': 156}, {'key': 'Accounting', 'doc_count': 52}, {'key': 'Engineering', 'doc_count': 52}, {'key': 'Finance', 'doc_count': 48}, {'key': 'Human Resources', 'doc_count': 48}, {'key': 'Sales', 'doc_count': 36}, {'key': 'Marketing', 'doc_count': 20}]}}}

Searching Phone Collection by Department 'IT'...
Search Results in Phone Collection for Department 'IT':
{'took': 338, 'timed_out': False, '_shards': {'total': 1, 'successful': 1, 'skipped': 0, 'failed': 0}, 'hits': {'total': {'value': 156, 'relation': 'eq'}, 'max_score': 1.0136626, 'hits': [{'_index': 'hash_yourphonelastfourdigits', '_id': 'MtJrrJIBJahXiCRm7-hc', '_score': 1.0136626, '_source': {'Employee ID': 'E02007', 'Full Name': 'Ezra Vu', 'Job Title': 'Network Administrator', 'Department': 'IT', 'Business Unit': 'Manufacturing', 'Ethnicity': 'Asian', 'Age': 62.0, 'Hire Date': '4/22/2004', 'Annual Salary': '$66,227 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Phoenix', 'Exit Date': '2/14/2014'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'M9JrrJIBJahXiCRm8OgZ', '_score': 1.0136626, '_source': {'Employee ID': 'E02023', 'Full Name': 'Lillian Lewis', 'Job Title': 'Technical Architect', 'Department': 'IT', 'Business Unit': 'Research & Development', 'Ethnicity': 'Black', 'Age': 43.0, 'Hire Date': '8/14/2013', 'Annual Salary': '$83,323 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Phoenix', 'Exit Date': '3/31/2019'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'PdJrrJIBJahXiCRm8Ohy', '_score': 1.0136626, '_source': {'Employee ID': 'E02173', 'Full Name': 'Zoey Leung', 'Job Title': 'Network Administrator', 'Department': 'IT', 'Business Unit': 'Research & Development', 'Ethnicity': 'Asian', 'Age': 40.0, 'Hire Date': '9/27/2007', 'Annual Salary': '$77,637 ', 'Bonus %': '0%', 'Country': 'China', 'City': 'Chongqing', 'Exit Date': '2/4/2017'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'RNJrrJIBJahXiCRm8Oiq', '_score': 1.0136626, '_source': {'Employee ID': 'E02219', 'Full Name': 'Iris Chung', 'Job Title': 'Manager', 'Department': 'IT', 'Business Unit': 'Research & Development', 'Ethnicity': 'Asian', 'Age': 52.0, 'Hire Date': '3/12/2013', 'Annual Salary': '$128,301 ', 'Bonus %': '6%', 'Country': 'China', 'City': 'Beijing', 'Exit Date': '9/17/2021'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'R9JrrJIBJahXiCRm8OjB', '_score': 1.0136626, '_source': {'Employee ID': 'E02236', 'Full Name': 'Jack Perez', 'Job Title': 'Cloud Infrastructure Architect', 'Department': 'IT', 'Business Unit': 'Research & Development', 'Ethnicity': 'Latino', 'Age': 30.0, 'Hire Date': '1/9/2017', 'Annual Salary': '$80,389 ', 'Bonus %': '0%', 'Country': 'Brazil', 'City': 'Manaus', 'Exit Date': '9/10/2017'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'SNJrrJIBJahXiCRm8OjJ', '_score': 1.0136626, '_source': {'Employee ID': 'E02244', 'Full Name': 'Connor Howard', 'Job Title': 'Systems Analyst', 'Department': 'IT', 'Business Unit': 'Specialty Products', 'Ethnicity': 'Caucasian', 'Age': 42.0, 'Hire Date': '3/15/2021', 'Annual Salary': '$44,265 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Austin', 'Exit Date': '6/27/2022'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'SdJrrJIBJahXiCRm8OjR', '_score': 1.0136626, '_source': {'Employee ID': 'E02253', 'Full Name': 'Leilani Ng', 'Job Title': 'Systems Analyst', 'Department': 'IT', 'Business Unit': 'Corporate', 'Ethnicity': 'Asian', 'Age': 48.0, 'Hire Date': '9/19/2011', 'Annual Salary': '$50,513 ', 'Bonus %': '0%', 'Country': 'United States', 'City': 'Seattle', 'Exit Date': '10/30/2019'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'TNJrrJIBJahXiCRm8Ojp', '_score': 1.0136626, '_source': {'Employee ID': 'E02288', 'Full Name': 'Christopher Vu', 'Job Title': 'Computer Systems Manager', 'Department': 'IT', 'Business Unit': 'Corporate', 'Ethnicity': 'Asian', 'Age': 47.0, 'Hire Date': '3/16/2002', 'Annual Salary': '$88,839 ', 'Bonus %': '5%', 'Country': 'United States', 'City': 'Phoenix', 'Exit Date': '10/28/2014'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'TdJrrJIBJahXiCRm8Ojw', '_score': 1.0136626, '_source': {'Employee ID': 'E02292', 'Full Name': 'Lily Molina', 'Job Title': 'Manager', 'Department': 'IT', 'Business Unit': 'Manufacturing', 'Ethnicity': 'Latino', 'Age': 40.0, 'Hire Date': '9/15/2009', 'Annual Salary': '$125,900 ', 'Bonus %': '7%', 'Country': 'United States', 'City': 'Seattle', 'Exit Date': '4/16/2018'}}, {'_index': 'hash_yourphonelastfourdigits', '_id': 'T9JrrJIBJahXiCRm8egA', '_score': 1.0136626, '_source': {'Employee ID': 'E02300', 'Full Name': 'Natalie Stewart', 'Job Title': 'Network Engineer', 'Department': 'IT', 'Business Unit': 'Corporate', 'Ethnicity': 'Caucasian', 'Age': 50.0, 'Hire Date':