

Round 2 code execution

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import pandas as pd

collections = {}

def createCollection(p_collection_name):

    collections[p_collection_name] = pd.DataFrame()

    print(f"Collection '{p_collection_name}' created.")

def indexData(p_collection_name, p_exclude_column):

    if p_collection_name not in collections:

        print(f"Collection '{p_collection_name}' does not exist.")

        return

    try:

        df =
pd.read_csv('C:/Users/admin/OneDrive/Desktop/notes/c_programs/Employee_data.csv') #
Adjust to your file path

        print(df.columns)

    except FileNotFoundError:

        print("CSV file not found. Please make sure the file is in the working directory.")

        return

    if p_exclude_column not in df.columns:

        print(f"Column '{p_exclude_column}' not found in the dataset.")

        return

    collections[p_collection_name] = df.drop(columns=[p_exclude_column], errors='ignore')

    print(f"Data indexed into collection '{p_collection_name}' excluding column
'{p_exclude_column}'.")

def searchByColumn(p_collection_name, p_column_name, p_column_value):
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if p_collection_name not in collections:

    print(f"Collection '{p_collection_name}' does not exist.")

    return


result = collections[p_collection_name][collections[p_collection_name][p_column_name]
== p_column_value]

print(f"Search Results in '{p_collection_name}' for { p_column_name} =
'{p_column_value}':")

print(result)

def getEmpCount(p_collection_name):

    if p_collection_name not in collections:

        print(f"Collection '{p_collection_name}' does not exist.")

        return


    count = collections[p_collection_name].shape[0]

    print(f"Employee Count in '{p_collection_name}': {count}")

    return count


def delEmpById(p_collection_name, p_employee_id):

    if p_collection_name not in collections:

        print(f"Collection '{p_collection_name}' does not exist.")

        return


    initial_count = collections[p_collection_name].shape[0]

    collections[p_collection_name] =
collections[p_collection_name][collections[p_collection_name]["Employee ID"] !=
p_employee_id]

    final_count = collections[p_collection_name].shape[0]

    if initial_count == final_count:

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        print(f"Employee with ID '{p_employee_id}' not found in collection
'{p_collection_name}'.")

    else:

        print(f"Employee with ID '{p_employee_id}' deleted from collection
'{p_collection_name}'.")

def getDepFacet(p_collection_name):

    if p_collection_name not in collections:

        print(f"Collection '{p_collection_name}' does not exist.")

        return

    department_count = collections[p_collection_name]['Department'].value_counts()

    print(f"Department Facet for collection '{p_collection_name}':")

    print(department_count)

v_nameCollection = 'Hash_saiakshay'

v_phoneCollection = 'Hash_5699'

createCollection(v_nameCollection)

createCollection(v_phoneCollection)

getEmpCount(v_nameCollection)

indexData(v_nameCollection, 'Department')

indexData(v_phoneCollection, 'Gender')

delEmpById(v_nameCollection, 'E02003')

getEmpCount(v_nameCollection)

searchByColumn(v_nameCollection, 'Department', 'IT')

searchByColumn(v_nameCollection, 'Gender', 'Male')

searchByColumn(v_phoneCollection, 'Department', 'IT')

getDepFacet(v_nameCollection)

getDepFacet(v_phoneCollection)

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