Experiment No: 02

Date: 23-07-2025

EDA – Data Import and Export

**Aim:** To import data from various sources, handle different formats, and export a DataFrame to an Excel file using Python.

**Code:**

# Step 1: Import libraries import pandas as pd import sqlite3

from bs4 import BeautifulSoup import requests from io import StringIO

# Step 2: Importing data from CSV csv\_data = pd.read\_csv("sample.csv") print("CSV Data:") print(csv\_data.head())

# Step 3: Importing data from Excel excel\_data = pd.read\_excel("sample.xlsx") print("\nExcel Data:")

print(excel\_data.head())

# Step 4: Importing data from SQL Database # (Creating temporary database and table for demo) conn = sqlite3.connect(":memory:") # In-memory DB csv\_data.to\_sql("students", conn, index=False, if\_exists="replace") sql\_data = pd.read\_sql("SELECT \* FROM students", conn) print("\nSQL Data:") print(sql\_data.head())

#web scraping # URL url =

"https://en.wikipedia.org/wiki/List\_of\_countries\_by\_population\_(United\_Nati ons)"

# Add headers to avoid blocking headers =

{"User-Agent": "Mozilla/5.0"} response = requests.get(url, headers=headers)

# Parse HTML

soup = BeautifulSoup(response.text, "html.parser")

# Find all tables with 'wikitable' class

tables\_html = soup.find\_all("table", {"class": "wikitable"})

print(f"Number of tables found: {len(tables\_html)}")

# Convert the first one into DataFrame if tables\_html:

tables = pd.read\_html(StringIO(str(tables\_html[0]))) web\_data = tables[0] print("Web Scraped Data:") print(web\_data.head()) else: print("No tables found on the page.")

print("Web Scraped Data:") print(web\_data.head(2))

# Step 6: Export DataFrame to Excel

csv\_data.to\_excel("exported\_data.xlsx", index=False) print("\nData exported successfully to 'exported\_data.xlsx'") **OUTPUT:**



**Result:** Successfully imported data from CSV, Excel, SQL, and web sources, handled multiple formats, and exported a DataFrame to Excel.