



United International University

Department of Computer Science and Engineering

DS 3885 (BA): Data Wrangling

Trimester: Spring 2025

Class Test 1, Total Marks: 20, Total Time: 30 minutes

Any examinee found adopting unfair means will be expelled from the trimester/program as per UIU disciplinary rules.

Question 1: You are developing a product recommendation system for an e-commerce platform. Your task is to collect a list of products that are currently popular from an external API that provides real-time product data. The API returns multiple products in JSON format, including details such as the product name, category, price, and customer rating.

The API endpoint: **`https://api.example.com/products/popular`**

A sample response from the API in JSON format:

```
{
  "products": [
    {
      "name": "Wireless Headphones",
      "category": "Electronics",
      "price": 120.99,
      "rating": 4.5
    },
    {
      "name": "Smartphone",
      "category": "Electronics",
      "price": 799.99,
      "rating": 4.7
    }
  ]
}
```

Write a Python script that:

1. Fetches the list of popular products from the API. [4]
2. Extracts only the name, category, and price from the JSON response. [4]
3. Saves the extracted information in a CSV file named `popular_products.csv`. [2]

Please Turn Over

Question 2: You are analyzing employee performance data for a company. The dataset includes details on employee IDs, performance ratings, bonuses, and departments. Below is a sample of the raw data:

Employee ID	Department	Performance Rating	Bonus	Date
1001	HR	4.2	1500	2023-01-15
1002	Sales	NULL	2000	2023/01/16
1003	Sales	3.8	NULL	17 January 2023
1004	Sales	4.5	1800	2023-01-18
1005	Sales	4.1	2100	January 19, 2023

Identify the inconsistencies in this dataset and describe how you would resolve them. [5]

- Fill in the missing Performance Rating for Employee ID 1002 using the average performance rating of employees in the same department. [3]
- Fill in the missing Bonus for Employee ID 1003 with the median bonus of employees in the same department. [2]