

Project 01: Grocery Basket Analyzer

Problem Statement:

You are developing a Python program for a grocery store to help analyze customer shopping baskets.

Each customer's basket is represented as a **list of tuples**, where each tuple contains the **item name** and **quantity purchased**. Your program must:

1. **Check for stock limits** using conditional statements:
 - If the quantity of any item exceeds 10, print a warning message: `"Item X exceeds the purchase limit!"`
2. **Calculate and display** the total quantity of items per basket using a `for` loop.
3. Store all **unique item names** from all baskets in a **set**.
4. Show how many **different types of items** were purchased across all customers.

Project 02: Student Performance Categorizer

Problem Statement:

You are tasked with developing a simple Python program for a school to analyze student exam scores and categorize their performance.

The school provides you with a list of students and their exam scores in the form of a list of tuples. Each tuple contains the student's name and their score (out of 100). Your program must:

1. **Classify** each student into one of the following performance categories using conditional statements:
 - **Excellent** (score ≥ 85)
 - **Good** ($70 \leq \text{score} < 85$)

- **Average** ($50 \leq \text{score} < 70$)
 - **Poor** ($\text{score} < 50$)
2. **Display** the students in each category using a **for** loop.
 3. **Store** all student names in a **set** to ensure uniqueness.
 4. Finally, print the total number of students and the number of unique students (using the set).