```
import csv
import sqlite3
class DatabaseConnector:
  Manages a connection to a SQLite database.
  def __init__(self, database_file):
    self.connection = sqlite3.connect(database file)
    self.cursor = self.connection.cursor()
    self.create tables()
  def create tables(self):
    Create the necessary tables if they don't already exist.
    self.cursor.execute(""
    CREATE TABLE IF NOT EXISTS product (
       id INTEGER PRIMARY KEY AUTOINCREMENT.
       name TEXT UNIQUE
    )
''')
    self.cursor.execute(""
    CREATE TABLE IF NOT EXISTS shipment (
       id INTEGER PRIMARY KEY AUTOINCREMENT,
       product id INTEGER,
       quantity INTEGER,
       origin TEXT,
       destination TEXT,
       FOREIGN KEY(product_id) REFERENCES product(id)
    '''')
  def populate(self, spreadsheet_folder):
    Populate the database with data imported from each spreadsheet.
    with open(f"{spreadsheet_folder}/shipping_data_0.csv", "r") as spreadsheet_file_0, \
       open(f"{spreadsheet folder}/shipping data 1.csv", "r") as spreadsheet file 1, \
       open(f"{spreadsheet folder}/shipping data 2.csv", "r") as spreadsheet file 2:
       csv_reader_0 = csv.reader(spreadsheet_file_0)
       csv reader 1 = csv.reader(spreadsheet file 1)
       csv_reader_2 = csv.reader(spreadsheet_file_2)
       self.populate first shipping data(csv reader 0)
       self.populate second shipping data(csv reader 1, csv reader 2)
  def populate first shipping data(self, csv reader 0):
    Populate the database with data imported from the first spreadsheet.
    for row index, row in enumerate(csv reader 0):
       if row index == 0:
         continue
```

```
origin = row[0]
     destination = row[1]
     product name = row[2]
     product quantity = int(row[4])
    self.insert product if it does not already exist(product name)
    self.insert shipment(product name, product quantity, origin, destination)
     print(f"Inserted product {row index} from shipping data 0")
def populate_second_shipping_data(self, csv_reader_1, csv_reader_2):
  Populate the database with data imported from the second and third spreadsheets.
  shipment info = {}
  for row index, row in enumerate(csv_reader_2):
    if row index == 0:
       continue
    shipment identifier = row[0]
    origin = row[1]
    destination = row[2]
    shipment info[shipment identifier] = {
       "origin": origin,
       "destination": destination,
       "products": {}
    }
  for row index, row in enumerate(csv reader 1):
     if row index == 0:
       continue
     shipment identifier = row[0]
     product name = row[1]
     products = shipment info[shipment identifier]["products"]
    if products.get(product name) is None:
       products[product name] = 1
     else:
       products[product name] += 1
  count = 0
  for shipment identifier, shipment in shipment info.items():
     origin = shipment["origin"]
     destination = shipment["destination"]
    for product name, product quantity in shipment["products"].items():
       self.insert product if it does not already exist(product name)
       self.insert shipment(product name, product quantity, origin, destination)
       print(f"Inserted product {count} from shipping data 1")
       count += 1
definsert product if it does not already exist(self, product name):
  Insert a new product into the database.
```

```
If a product already exists in the database with the given name, ignore it.
    query = "INSERT OR IGNORE INTO product (name) VALUES (?);"
    self.cursor.execute(query, (product_name,))
    self.connection.commit()
  def insert shipment(self, product name, product quantity, origin, destination):
    Insert a new shipment into the database.
    query = "SELECT id FROM product WHERE name = ?;"
    self.cursor.execute(query, (product name,))
    product_id = self.cursor.fetchone()[0]
    query = "INSERT INTO shipment (product_id, quantity, origin, destination) VALUES (?, ?, ?, ?);"
    self.cursor.execute(query, (product id, product quantity, origin, destination))
    self.connection.commit()
  def close(self):
    self.connection.close()
if name == ' main ':
  database connector = DatabaseConnector("shipment database.db")
  database_connector.populate("./data")
  database_connector.close()
```