EDS Practical 2

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csv FILE :
https://drive.google.com/file/d/11DRZvERxouyXd-XZcUkRoEikpNtUQ03E/view?usp=sharing

CODE :

```
import csv

# Read the sales data from the CSV file
def read_sales_data(filename):
    sales_data = []
    with open(filename, 'r') as file:
        reader = csv.DictReader(file)
        for row in reader:
            sales_data.append(row)
    return sales_data

# Store product details in a list
def store_products(sales_data):
    products = []
    for row in sales_data:
        products.append(row['Product Details'])
    return products

# Store supplier details in a dictionary
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```
def store_suppliers(sales_data):
    suppliers = {}
    for row in sales_data:
        supplier = row['Supplier Details']
        if supplier not in suppliers:
            suppliers[supplier] = 1
        else:
            suppliers[supplier] += 1
    return suppliers

# Store customer details in a tuple
def store_customers(sales_data):
    customers = set()
    for row in sales_data:
        customers.add((row['Customer Details'], row['Gender']))
    return customers

# Find the most popular product for sale
def find_most_popular_product(products):
    product_counts = {}
    for product in products:
        if product not in product_counts:
            product_counts[product] = 1
        else:
            product_counts[product] += 1
    most_popular_product = max(product_counts, key=product_counts.get)
    return most_popular_product
```

```
# Find the best supplier for sales
def find_best_supplier(suppliers):
    best_supplier = max(suppliers, key=suppliers.get)
    return best_supplier

# Find the customer who buys most of the products
def find_customer_with_most_products(sales_data):
    customer_counts = {}
    for row in sales_data:
        customer = row['Customer Details']
        if customer not in customer_counts:
            customer_counts[customer] = 1
        else:
            customer_counts[customer] += 1
    customer_with_most_products = max(customer_counts, key=customer_counts.get)
    return customer_with_most_products

# Find the number of customers who are 'Female'
def count_female_customers(customers):
    female_customers = sum(1 for _, gender in customers if gender == 'Female')
    return female_customers

# Main function
def main():
    sales_data = read_sales_data('/content/Sales.csv')
    products = store_products(sales_data)
```

```
    suppliers = store_suppliers(sales_data)
    customers = store_customers(sales_data)

    most_popular_product = find_most_popular_product(products)
    best_supplier = find_best_supplier(suppliers)
    customer_with_most_products = find_customer_with_most_products(sales_data)
    female_customers = count_female_customers(customers)

    print("Most popular product: ", most_popular_product)
    print("Best supplier: ", best_supplier)
    print("Customer with most products: ", customer_with_most_products)
    print("Number of female customers: ", female_customers)

if __name__ == '__main__':
    main()
```

OUTPUT :

Most popular product: Heater

Best supplier: Mobile Shop

Customer with most products: Sumedh

Number of female customers: 3