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import pandas as pd
from sklearn.cluster import KMeans

# Load the customer data
data = pd.read_csv('mall_customers.csv')

# Create a class to represent a customer
class Customer:
    def __init__(self, customer_id, gender, age, income):
        self.customer_id = customer_id
        self.gender = gender
        self.age = age
        self.income = income

# Create a list of customers
customers = []
for i in range(len(data)):
    customer = Customer(data['customer_id'][i], data['gender'][i], data['age'][i], data['income'][i])
    customers.append(customer)

# Create a function to calculate the distance between two customers
def distance(customer1, customer2):
    return np.sqrt((customer1.age - customer2.age)**2 + (customer1.income - customer2.income)**2)

# Create a function to perform k-means clustering
def k_means_clustering(customers, k):
    kmeans = KMeans(n_clusters=k)
    kmeans.fit(customers)
    return kmeans.labels_

# Perform k-means clustering on the customers
labels = k_means_clustering(customers, 3)

# Print the cluster labels
print(labels)
```