Expense Tracker

import json

import os

class ExpenseTracker:

def \_\_init\_\_(self, data\_file="expenses.json"):

self.data\_file = data\_file

self.expenses = self.load\_data()

def load\_data(self):

if os.path.exists(self.data\_file):

with open(self.data\_file, 'r') as file:

return json.load(file)

return {"expenses": []}

def save\_data(self):

with open(self.data\_file, 'w') as file:

json.dump(self.expenses, file, indent=2)

def add\_expense(self, amount, description, category):

expense = {"amount": amount, "description": description, "category": category}

self.expenses["expenses"].append(expense)

self.save\_data()

def get\_monthly\_summary(self):

monthly\_summary = {}

for expense in self.expenses["expenses"]:

month\_year = expense.get("date", "Unknown")

if month\_year not in monthly\_summary:

monthly\_summary[month\_year] = 0

monthly\_summary[month\_year] += expense["amount"]

return monthly\_summary

def get\_category\_summary(self):

category\_summary = {}

for expense in self.expenses["expenses"]:

category = expense["category"]

if category not in category\_summary:

category\_summary[category] = 0

category\_summary[category] += expense["amount"]

return category\_summary

def show\_expenses(self):

for expense in self.expenses["expenses"]:

print(f"Amount: ${expense['amount']} | Description: {expense['description']} | Category: {expense['category']}")

# User Interface

def main():

tracker = ExpenseTracker()

while True:

print("\nExpense Tracker Menu:")

print("1. Add Expense")

print("2. View Monthly Summary")

print("3. View Category-wise Expenditure")

print("4. View All Expenses")

print("5. Exit")

choice = input("Enter your choice (1-5): ")

if choice == "1":

amount = float(input("Enter the amount spent: "))

description = input("Enter a brief description: ")

category = input("Enter the expense category: ")

tracker.add\_expense(amount, description, category)

print("Expense added successfully!")

elif choice == "2":

monthly\_summary = tracker.get\_monthly\_summary()

print("\nMonthly Summary:")

for month\_year, total\_amount in monthly\_summary.items():

print(f"{month\_year}: ${total\_amount}")

elif choice == "3":

category\_summary = tracker.get\_category\_summary()

print("\nCategory-wise Expenditure:")

for category, total\_amount in category\_summary.items():

print(f"{category}: ${total\_amount}")

elif choice == "4":

tracker.show\_expenses()

elif choice == "5":

print("Exiting Expense Tracker. Goodbye!")

break

else:

print("Invalid choice. Please enter a number between 1 and 5.")

if \_\_name\_\_ == "\_\_main\_\_":

main()