import json

import os

from datetime import datetime

DATA\_FILE = "expenses.json"

def load\_expenses():

if os.path.exists(DATA\_FILE):

with open(DATA\_FILE, "r") as f:

return json.load(f)

return []

def save\_expenses(expenses):

with open(DATA\_FILE, "w") as f:

json.dump(expenses, f, indent=4)

def add\_expense(expenses):

try:

amount = float(input("Enter amount: ₹"))

description = input("Enter description: ")

category = input("Enter category (food, transport, entertainment, etc.): ").lower()

date = input("Enter date (YYYY-MM-DD) or press Enter for today: ")

if not date:

date = datetime.today().strftime('%Y-%m-%d')

expenses.append({

"amount": amount,

"description": description,

"category": category,

"date": date

})

save\_expenses(expenses)

print("Expense added successfully!\n")

except ValueError:

print("Invalid input. Please enter a valid number for the amount.\n")

def view\_expenses(expenses):

if not expenses:

print("No expenses found.\n")

return

print("\nAll Expenses:")

for exp in expenses:

print(f"{exp['date']} - ₹{exp['amount']} - {exp['description']} ({exp['category']})")

print()

def monthly\_summary(expenses):

summary = {}

for exp in expenses:

month = exp['date'][:7]

summary[month] = summary.get(month, 0) + exp['amount']

print("\nMonthly Summary:")

for month, total in summary.items():

print(f"{month}: ₹{total}")

print()

def category\_summary(expenses):

summary = {}

for exp in expenses:

cat = exp['category']

summary[cat] = summary.get(cat, 0) + exp['amount']

print("\nCategory Summary:")

for cat, total in summary.items():

print(f"{cat}: ₹{total}")

print()

def main():

expenses = load\_expenses()

while True:

print("=== Expense Tracker ===")

print("1. Add Expense")

print("2. View All Expenses")

print("3. Monthly Summary")

print("4. Category Summary")

print("5. Exit")

choice = input("Choose an option (1-5): ")

if choice == '1':

add\_expense(expenses)

elif choice == '2':

view\_expenses(expenses)

elif choice == '3':

monthly\_summary(expenses)

elif choice == '4':

category\_summary(expenses)

elif choice == '5':

print("Goodbye!")

break

else:

print("Invalid choice. Please select a valid option.\n")

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

main()