

```
import csv
```

```
expense_list = [] # to store all the expenses from user and csv file as a list of dictionary.
```

```
# try/except block to check whether expense.csv file exists or not.
```

```
try:
```

```
    with open('expense.csv', mode='r', newline='') as file:
```

```
        reader = csv.DictReader(file)
```

```
        for row in reader:
```

```
            expense_list.append(dict(row))
```

```
except FileNotFoundError:
```

```
    print("File not found as this is the first run")
```

```
# add_expense method to add user expenses
```

```
def add_expense():
```

```
    date_of_expense = input("Enter the date of expense in YYYY-MM-DD format: ")
```

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

```
    amount_spent = float(input("Enter the amount of the expense: "))
```

```
    description = input("Enter the description of the expense: ")
```

```
    expense_dict = {}
```

```
    expense_dict["date"] = date_of_expense
```

```
    expense_dict["category"] = category
```

```
    expense_dict["amount"] = amount_spent
```

```
    expense_dict["description"] = description
```

```
    expense_list.append(expense_dict)
```

```
# view_expense method shows the expense for the user for a month and discards entries where any one field is blank
```

```
def view_expense():
```

```
    for expense in expense_list:
```

```
        if(expense["category"] == "" or expense["date"] == ""
```

```
            or expense["amount"] == "" or expense["description"] == ""):
```

```
            print(f"Expense entry is invalid as some fields are blank/empty: {expense['description']}")
```

```
        else:
```

```
            print(expense)
```

```
# track_budget method asks user to enter the monthly budget and provides insights whether user exceeded the budget or not
```

```
def track_budget():
```

```
    monthly_budget = float(input("Enter the monthly budget: "))
```

```
    total_expense = total_expenses()
```

```
    if total_expense > monthly_budget:
```

```
        print("You have exceeded your monthly budget")
```

```
    else:
```

```
        print(f"Remaining budget: {monthly_budget - total_expense}")
```

```
# total_expenses is a helper method to calculate total expenditure done so far by the user.
```

```
def total_expenses():
```

```
    total_expense = 0
```

```
    for expense in expense_list:
```

```
total_expense = total_expense + float(expense["amount"])
return total_expense
```

# save\_expense method saves the expense from the list to a csv file.

# Ensure to call it before exiting the application, otherwise newly added expenses might be lost.

```
def save_expense():
    if(expense_list == []):
        print("No expenses to save")
        return
    with open('expense.csv', mode='w', newline='') as file:
        writer = csv.DictWriter(file, fieldnames=expense_list[0].keys())
        writer.writeheader()
        writer.writerows(expense_list)
```

# Interactive Menu to ask for user choices.

```
while True:
    print("=====")
    print("1. Add Expense")
    print("2. View Expense")
    print("3. Track Budget")
    print("4. Save Expense")
    print("5. Exit")
    print("=====")

    user_choice = int(input("Enter your choice: "))
    if user_choice == 1:
        add_expense()
    elif user_choice == 2:
        view_expense()
    elif user_choice == 3:
        track_budget()
    elif user_choice == 4:
        save_expense()
    elif user_choice == 5:
        print("Exiting the application....")
        break
    else:
        print("Invalid choice")
```