

Python Programing Project -3 : Expense Tracker

Project Overview:

-The Expense Tracker project is designed to reinforce your understanding of python programming concepts and enhance skills in building practical applications.

-This real-world application will involve handling data,user input and implementing key functionalities.

Objectives:

- *Develop a system that allows user input their daily expenses.

- *Implement a mechanism to store and manage the entered expense data.

- *Categorize expenses into different categories for better organization.

- *Provide user with insights into their spending patterns,such as monthly summaries and category-wise expenditure.

- *Create a user – friendly interface for a seamless user experience.

Implement erroe handing to ensure the application can handle unexpected inputs gracefully.

- *Document your code effectively to demonstrate clarity and understanding.

Requirements and features:

- *Allows users to input their daily expenses,including the amount spent and a brief description.

- *Use appropriate data structures or file handling techniques to stoare and retrieve expence data.

- *Implement the ability for users to categorize their expenses (e.g., food, transportation, entertainment.)
- *Provide users with the option to view summaries of their monthly expenses and category-wise expenditure.
- *Create a simple and intuitive user interface to interact with the Expense Tracker.
- *Include error handling mechanisms to address potential issue during user interaction.
- *Provide clear documentation for your code, explaining for your code, explaining the logic behind key functions and overall program structure.

Python code:

```
import csv

import os

# File to store expenses

FILENAME=" expenses.csv"

# Function to load existing expenses

def load_expenses():

    expenses = [ ]

    if os.path.exists (FILENAME):

        with open(FILENAME," r" ) as file:

            reader =csv.reader( file)

            next (reader, None) # Skip header
```

```

for row in reader:

    expenses.append(row)

return expenses

# Function to save an expense

def save_expense (data,category,amount,description):

    with open (FILENAME, " a" ,newline=" " ) as file:

        writer = csv.writer(file)

        writer.writerow([data,category,amount,description])

# Function to display expenses

def display_expenses(expenses):

    if not expenses:

        print(" \nNo expenses recorded yet." )

    return

    print(" \nExpense List:" )

    print(" :<12}{:<15}{:<10}{}" .format(" Date" ," Caregory" ," Amount" ,
    " Description" ))

    print(" -" *50)

    for expense in expenses:

        print(" {:12}{:<15}{:<10}{}" .format(*expense))

# Calculate total expenses

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total = sum (float(exp[2])for exp in expenses)

print(" \nTotal Expenses:${:.2f}" .format(total))

# Main function

def main():

print(" Welcome to Expense Tracker" )

expenses = load_expenses()

while True:

print(" \nOptions:" )

print(" 1.Add Expenses" )

print(" 2.View Expenses" )

print(" 3.Exit" )

choice = input(" Enter choice (1-3):" )

if choice==" 1" :

date = input(" Enter date (YYYY-MM-DD:" )

category = input(" Enter category (Food,Travel,Shopping,etc.):" )

amount = input(" Enter amount($):" )

description = input(" Enter description:" )

save_expense(date,category,amount,description)

print(" Expense added successfully!" )

elif choice == " 2" :
```

```
expenses = load_expenses()

display_expenses(expenses)

elif choice == " 3" :

print("  Exiting... Have a great day!" )

break

else:

print("  Invalid choice.Please enter 1,2,or3." )

if __name__ == "__main__" :

main()
```