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ASSIGNMENT 2 EXPENSE TRACKER

As part of your role in a financial services company, you are tasked with developing a Python project to create a robust expense tracker application for the organization. This application will enable users to record and categorize daily expenses and generate comprehensive reports to analyze spending habits. The system should include features such as user authentication and efficient expense management, providing valuable insights for personal and corporate financial planning.

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class Expencc:
    def __init__(self,expencc_id,date,category,description,amount):
        self.expencc_id = expence_id
        self.date = date
        self.category = category
        self.description = description
        self.amount = amount

    def __str__(self):
        return f"Expencc id: {self.expencc_id}\nDate: {self.date}\nCategory: {self.category}\nDescription: {self.description}\nAmount: {self.amount}"

exp = []
categories = {}

def add_expence(expence):
    exp.append(expence)
    print(f"\nExpense added succesfully...!! ")
    cli()

def update_expence(expence_id, new_expence):
    for ex in exp:
        if expence_id == ex.expencc_id:
            ex.date = new_expence.date
            ex.category = new_expence.category
            ex.description = new_expence.description
            ex.amount = new_expence.amount
            print("Updated Sucesfully")
            success = 1
            cli()
    if success != 1:
        print("Id not found!")
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def display_expences():
    for i in exp:
        print("-----")
        print(i)
        print("-----")
    cli()

user_db = {'ajai':'ajai@123','melissa':'melissa@123'}
def authenticate_user(u_name,password):
    success = 0
    print("\n-----")
    print("User Login")
    print("-----")
    for name,pwd in user_db.items():
        if name == u_name and pwd == password:
            print(f"\nHello {u_name}..Welcome to Expense Tracker\n")
            success = 1
            return True
    if success == 0:
        return False

def categorize_expenses():
    cat = []
    for ex in exp:
        if ex.category in cat:
            categories[ex.category] += ex.amount
        else:
            cat.append(ex.category)
            categories[ex.category] = ex.amount

    print("Category Expenses")
    print("-----")
    for i,j in categories.items():
        print(f"{i}:{j}")
    total = 0
    for k,v in categories.items():
        total = total + v
    print("Total Expenche: ",total)
    cli()

def delete_expence(id):
    deleted = 0
    for i in exp:
        if i.id == id:
            exp.remove(i)
            deleted = 1
            print("\nExpenche deleted sucesfully..!")
            cli()
    if deleted == 0:

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        print("Given id not valid..!")
        cli()

def cli():
    print("""
    1. Adds a new expense
    2. Updates an existing expense
    3. Deletes an expense
    4. Displays all expenses
    5. Generates a summary report
    6. Exits the application
    """)
    ch = int(input("Choice: "))
    if ch == 1:
        exp = int(input("Expense id: "))
        date = input("Date: ")
        cat = input("Category: ")
        desc = input("Description: ")
        amt = int(input("Amount: "))
        exp1 = Expense(exp,date,cat,desc,amt)
        add_expense(exp1)
    elif ch == 2:
        id = int(input("Enter id to update: "))
        print("\nEnter new details: ")
        date = input("Date: ")
        cat = input("Category: ")
        desc = input("Description: ")
        amt = int(input("Amount: "))
        exp1 = Expense(id,date,cat,desc,amt)
        update_expense(id,exp1)
    elif ch == 3:
        id = int(input("Enter id to delete: "))
        delete_expense(id)
    elif ch == 4:
        display_expenses()
    elif ch == 5:
        categorize_expenses()
    elif ch == 6:
        print("Exiting")
        exit(0)
    else:
        print("Invalid choice")

print("\n-----")
print("Expense Tracker")
print("-----\n")
print("1. Login")
print("2. Exit")
ch = int(input("Choice: "))

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while(1):
    if ch == 1:
        name = input("Username: ")
        pwd = input("Password: ")
        if(authenticate_user(name,pwd)):
            cli()
        else:
            print("Invalid Credentials..!Try again\n")
    elif ch == 2:
        exit()
    else:
        print("Invalid Choice...!")

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----- Expense Tracker -----

1. Login
2. Exit

Choice: 1
 Username: ajai
 Password: ajai@123

----- User Login -----

Hello ajai..Welcome to Expense Tracker

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 1
 Expencc id: 1
 Date: 22/08/2024
 Category: Food
 Description: Lunch @ UST
 Amount: 150

Expense added succesfully...!!

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 1
Expense id: 2
Date: 18/10/2014
Category: Dress
Description: Shirt for friend
Amount: 1500

Expense added successfully...!!

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 1
Expense id: 3
Date: 18/08/2024
Category: Food
Description: Dinner
Amount: 225

Expense added successfully...!!

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 4

Expense id: 1
Date: 22/08/2024
Category: Food
Description: Lunch @ UST

Amount: 150

Expencc id: 2

Date: 18/10/2014

Category: Dress

Description: Shirt for friend

Amount: 1500

Expencc id: 3

Date: 18/08/2024

Category: Food

Description: Dinner

Amount: 225

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 2

Enter id to update: 1

Enter new details:

Date: 23/10/2024

Category: Food

Description: Lunch

Amount: 220

Updated Sucesfully

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 5

Category Expenses

Food:445

Dress:1500

Total Expencc: 1945

1. Adds a new expense
2. Updates an existing expense
3. Deletes an expense
4. Displays all expenses
5. Generates a summary report
6. Exits the application

Choice: 6

Exiting