**CODE:**

import mysql.connector  
  
  
# ---------------- Database Connection ----------------  
def get\_connection():  
   return mysql.connector.connect(  
       host="localhost",  
       user="root",          # change if needed  
       password="pass@word1", # change if needed  
       database="expense"     # your DB name  
   )  
  
  
# ---------------- CRUD Functions ----------------  
def add\_expense():  
   expense\_date = input("Enter date (YYYY-MM-DD): ")  
   category = input("Enter category (Food/Travel/Shopping/etc): ")  
   amount = float(input("Enter amount: "))  
   description = input("Enter description: ")  
  
   conn = get\_connection()  
   cursor = conn.cursor()  
   query = """  
       INSERT INTO expenses (date, category, amount, description)  
       VALUES (%s, %s, %s, %s)  
   """  
   values = (expense\_date, category, amount, description)  
  
   cursor.execute(query, values)  
   conn.commit()  
   conn.close()  
   print("✅ Expense added successfully!")  
  
  
def view\_expenses():  
   conn = get\_connection()  
   cursor = conn.cursor()  
   cursor.execute("SELECT id, date, category, amount, description FROM expenses")  
   rows = cursor.fetchall()  
   conn.close()  
  
   print("\n------ Expense Records ------")  
   if rows:  
       for row in rows:  
           print(  
               f"ID: {row[0]} | Date: {row[1]} | Category: {row[2]} | Amount: ₹{row[3]} | Desc: {row[4]}"  
           )  
   else:  
       print("No expenses found.")  
   print("------------------------------\n")  
  
  
def update\_expense():  
   expense\_id = int(input("Enter expense ID to update: "))  
   new\_amount = float(input("Enter new amount: "))  
  
   conn = get\_connection()  
   cursor = conn.cursor()  
   cursor.execute("UPDATE expenses SET amount = %s WHERE id = %s", (new\_amount, expense\_id))  
   conn.commit()  
   conn.close()  
   print("✏️ Expense updated successfully!")  
  
  
def delete\_expense():  
   expense\_id = int(input("Enter expense ID to delete: "))  
  
   conn = get\_connection()  
   cursor = conn.cursor()  
   cursor.execute("DELETE FROM expenses WHERE id = %s", (expense\_id,))  
   conn.commit()  
   conn.close()  
   print("🗑️ Expense deleted successfully!")  
  
  
# ---------------- Monthly Summary ----------------  
def monthly\_summary():  
   conn = get\_connection()  
   cursor = conn.cursor()  
  
   query = """  
       SELECT category, SUM(amount)   
       FROM expenses   
       WHERE MONTH(date) = MONTH(CURDATE()) AND YEAR(date) = YEAR(CURDATE())  
       GROUP BY category  
   """  
   cursor.execute(query)  
   rows = cursor.fetchall()  
   conn.close()  
  
   if rows:  
       print("\n--- Monthly Expense Summary ---")  
       total\_month = 0  
       for row in rows:  
           print(f"Category: {row[0]} | Total Spent: ₹{row[1]}")  
           total\_month += row[1]  
       print(f"\n💰 Total Expenses This Month: ₹{total\_month}")  
   else:  
       print("\nNo expenses recorded for this month yet.")  
  
  
# ---------------- Main Menu ----------------  
def main():  
   while True:  
       print("\n--- Expense Management System ---")  
       print("1. Add Expense")  
       print("2. View Expenses")  
       print("3. Update Expense")  
       print("4. Delete Expense")  
       print("5. Monthly Summary")  
       print("6. Exit")  
  
       choice = input("Enter choice: ")  
  
       if choice == "1":  
           add\_expense()  
       elif choice == "2":  
           view\_expenses()  
       elif choice == "3":  
           update\_expense()  
       elif choice == "4":  
           delete\_expense()  
       elif choice == "5":  
           monthly\_summary()  
       elif choice == "6":  
           print("Exiting... Bye 👋")  
           break  
       else:  
           print("❌ Invalid choice! Try again.")  
  
  
if \_\_name\_\_ == "\_\_main\_\_":  
   main()

**SQL Query:**

CREATE TABLE expenses (  
    id INT AUTO\_INCREMENT PRIMARY KEY,  
    date DATE NOT NULL,  
    category VARCHAR(100) NOT NULL,  
    amount DECIMAL(10,2) NOT NULL,  
    description VARCHAR(255)  
);

**OUTPUT SCREENSHOTS:**

**A screenshot of a computer program

AI-generated content may be incorrect.**

**Fig: Adding an expense**

**A screenshot of a computer

AI-generated content may be incorrect.**

**Fig: Extracting Monthly summary**

**A screenshot of a computer program

AI-generated content may be incorrect.**

**Fig: Updating an Expense**

**A computer screen shot of a black screen

AI-generated content may be incorrect.**

**Fig: Deleting an Expense**

**A screenshot of a computer program

AI-generated content may be incorrect.**

**Fig: Exiting**