

Python Functions Exercise - Personal Expense Tracker

Exercise 1: Write a function `show_menu()`

- Displays the main menu: Add expense, View total, View expenses by category, Exit.

Exercise 2: Write a function `get_user_choice()`

- Takes no parameters.
- Asks user to enter their menu choice (number).
- Returns the choice.

Exercise 3: Write a function `add_expense()`

- Takes no parameters.
- Prompts user for: amount spent, category, short description.
- Returns a tuple or dictionary with the expense details.

Exercise 4: Write a function `save_expense(expense, expenses_list)`

- Takes an expense (dict/tuple) and an expenses list.
- Appends the expense to the list.
- Returns the updated list.

Exercise 5: Write a function `calculate_total(expenses_list)`

- Takes the expenses list as input.
- Loops through expenses, sums the amounts.
- Returns the total.

Exercise 6: Write a function `show_total(total)`

- Takes total amount as parameter.
- Prints the total in a nice message.

Exercise 7: Write a function `get_expenses_by_category(expenses_list, category)`

- Takes the expenses list and a category name.
- Filters and returns only expenses in that category.

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Exercise 8: Write a function `show_expenses(expenses_list)`

- Takes a list of expenses.
- Displays each expense: amount, category, description.

Exercise 9: Write a function `get_all_categories(expenses_list)`

- Takes expenses list.
- Extracts unique categories.
- Returns list of unique categories.

Exercise 10: Write a function `show_category_report(expenses_list)`

- Takes expenses list.
- For each category, show total spent.
- Calls `get_all_categories()` and `get_expenses_by_category()`.
- Uses `calculate_total()` inside.

Exercise 11: Write a function `exit_program()`

- Prints goodbye message.
- No return value.

Exercise 12: Write a function `handle_choice(choice, expenses_list)`

- Takes menu choice and expenses list.
- Calls appropriate functions based on choice.

Exercise 13: Write a function `main()`

- Controls the program loop.
- While loop: shows menu, gets choice, calls `handle_choice`.
- Exits loop if choice = exit.

Exercise 14: Write a function `is_valid_choice(choice)`

- Checks if choice is valid (1-4).

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- Returns True/False.

Exercise 15: Write a function `get_category_input()`

- Prompts user to enter a category name.
- Returns the input.