

Specification Document

Project : Wallet (incomes and expenses):

Create a program to store your incomes and expenses in a database. Users should be able to add incomes and expenses to the database. For each entry the program should store the following data: *date* (year, month and day), *type* (income or expense), *category* (like household, food, party, travel, scholarship, salary, money from poker games, etc.), and the *amount* given in Euros. The program should be able to load an existing database into memory (create a new if there is no database yet), and save the database (from the memory) into a file.

Positive flow of the program :

- Display total expenses and incomes, the name of the most expensive category and its expenses, and the overall balance of the user.
- Menu shown to select options or exit the program.
- Add new income/expense entry into the database.
- Create new categories on user's request.
- for a user-selected time period (the user may enter the start and end date of the period) display statistics for each category (total spent, total income, largest expense).
- Users could exit the program at any time.

Exception scenarios :

- E001 : Income or expense entered value is not a number ⇒ Display an informative error message (ex: "Value entered is not a number (E001)").
- E002 : Date entered is not valid (ex : more than 31 days or invalid order...) ⇒ Display an informative message (ex "Date entered is not valid! Please Enter dates like 2022 04 19 (E002)").
- E003 : External database could not be uploaded ⇒ Display error message (ex: "Failed to upload database file! Please retry or check other options (E003)").

Non-Functional requirements:

- All elements of the program must be standard and portable. (ISO/IEC 9899:1990)
- The program should compile without errors or warnings.
- Menu options shouldn't take more than 5 seconds to display.
- Source code, Developer doc (including testing doc) and Users manual should be delivered before 2022-11-28.