IT5007: Software Engineering on Application Architecture

Assignment-1: Expense Tracker

Deadline: 16th Feb. 23:59 PM

Points: 20

In this assignment, you are required to build a web application for expense tracking. This application must support adding new expenses, updating an existing expense, deleting an expense entry, and displaying the list of expenses. Each expense must have a serial number, title, description, amount, category, and date.

Learning Outcomes

- Manage a project using Git
- Web-based Single Page Application (SPA)
- Writing HTML, CSS, JS and integrating them
- JS: Writing loops to display expenses – DOM manipulation. Storing data local to the browser (i.e., without using DB) in JS variables.
- CSS: Customized styling for each category of expense in the system.
- HTML: Basic HTML coding

Guidelines and Assumptions

1. Our website will be hosted on our own laptop/desktop and does not need to be accessed from the internet. We will enable internet accessibility towards the end of the course.
2. We will be designing a SPA (Single Page Application), where all the functionality of the website is written within a single HTML file instead of having cross-references across HTML files.
3. The data (i.e., the list of tasks) will be maintained within the browser using HTML, JS constructs. Use of Databases is not allowed. One way to achieve this is through Javascript cookies. Another way is to use the local storage provided by browsers. This wasn't taught in the lectures and needs some reading!
4. You can come up with your own list of 4 or 5 categories.
5. The data has the following format:

Serial Number	Title	Description	Amount	Category	Date
1	Grocery Shopping	Weekly grocery run at the supermarket	85.50	Food & Dining	2024-08-25
2	Monthly Rent	Rent payment for September	1,200.00	Housing	2024-09-01

The front-end needs to have the following functionality:

1) Design a landing page for the website and create navigation panes for each functionality (e.g., Add, Update, etc.). When the user clicks on each button in the navigation bar, only the relevant section of the page must be displayed. Hint: Use the `hidden` property of HTML elements for this. [3 point]
2) **Add** an expense. This task has the aforementioned attributes (e.g., category, etc). [3 points]
3) **Delete or Update** the expense from the expense list given the expense serial number**.** You can either delete/update by asking for the id of the expense or you can add delete/update button next to each expense (for e.g., when shown in the display page) [3 points]
4) **Display** the list of all expenses. Create a filter to display only the expenses in a particular category. [3 points]
5) Add sufficient messages to keep the user informed (e.g., error when a delete is requested on a non-existent expense) [1 point]
6) Try to make the website look pretty by using stylesheets and navigation bar, similar to what was taught in the class. You must use different colour schemes for different categories of expenses. [2 points]
7) Project Management through Git: We expect you to make one commit for each question. If you want to add more features/fix bugs, you are free to make additional commits. The commit messages must be meaningful. [5 marks]

Submission details:

1) Submission is through Github Classroom. More instructions will be given soon. You will be given your own github repository for this assignment, where you can "git push" your code.
2) We will look at the git commit timestamp to determine if you have completed the assignment before the deadline. NO SUBMISSION is required on Canvas.
3) You will be provided with template code, where you can fill-in-the-blanks to get the code to work. You are free to make changes, add, or delete lines of code from the template. Also, the template may be inaccurate (i.e., doesn't match project requirements) and should only be seen as a starting point for your assignment.