Expense Tracker – Web Application

MINOR PROJECT SYNOPSIS

BACHELOR OF TECHNOLOGY

Information Technology

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1. Introduction

Modern life offers a plethora of options of services and goods for consumers. As a result, people's expenses have gone up dramatically, e.g., compared to a decade ago, and the cost of living has been increasing day by day. Thus it becomes essential to keep a check on expenses in order to live a good life with a proper budget set up.

This Expense Tracker is a web application falls in the Finance Category and serves the important purpose of managing finances which is a very important part of one's life. The software product went through the design, development, and the testing phase as a part of the Software Development Lifecycle.

The Tools and technologies used in this Web application are –

- Technology Stack -MERN(Mongo DB, Express JS, React ,Node JS)
- Framework Used- Tailwind CSS
- Tools – Redux, RTK query , Git

2. Objectives

2.1 The main aim of this project is to manage details of expense category, Type ,user , registration . the purpose of the project is to reduce the manual work for managing expenses.

2.2 Provides a form to enter the transaction details such as transaction type, savings type and amount with a chart to show all the expenses and savings to the user . User can also see all the expenses made as history

2.3 This web application also provides authentication with a Login / Registration Integration to provide each user with security to manage all their expenses.

2.4 To design a user friendly and an attractive interface so that users can easily access the system. To develop a systematic system that will help to improve users' financial management and forecast future budget planning. To test and evaluate the reliability of the system to generate monthly report and forecast budget for the users

3. Feasibility Study

The process of conducting a feasibility study in software engineering involves analyzing all aspects of the project when planning it before starting it. The process involves collecting data and evaluating different aspects of the project based on specific parameters such as time and budget constraints.

Phase 1:
Requirement Gathering The first phase is done by brainstorming the solution for the problem occurred. Hence, this project, Expenses Tracker System was decided. At this stage, all possible requirements are collected in order to develop the system by doing questionnaire

Phase 2:
System Design During this phase, the requirements captured from the first phase are studied and the system design for Expenses Tracker is prepared which specifies hardware and system requirements. This is to ensure that every requirement and any related things need to be done are suitable with the system. This stage will help in defining the overall system architecture for Expenses Tracker System

Phase 3:
Implementation As the name implies, in this phase the source code is written as per requirements. The information from the previous stage is taken and a working code is written to create a functional product. Small pieces of code will be implemented and then are integrated at the end of this phase or the beginning of the next. For Expenses Tracker System is developed using VS Code, Mongo DB and Git

Phase 4:
Testing Once the implementation is completed, the final product of Expenses Tracker will be tested and evaluated to find any problem that might occur on its performance. Bugs is fixed in this phase. This is also where the system will be determine whether it meets the requirements or not.

Phase 5:
Deployment In this phase, the complete product of Expenses Tracker will be released and tested to the end-users. They will use the system and give their feedback on whether it needs to be improved or modify. Any modifications or changes are being made based on the feedback from the user to make sure the system is completely fulfilling the requirements.

Phase 6:

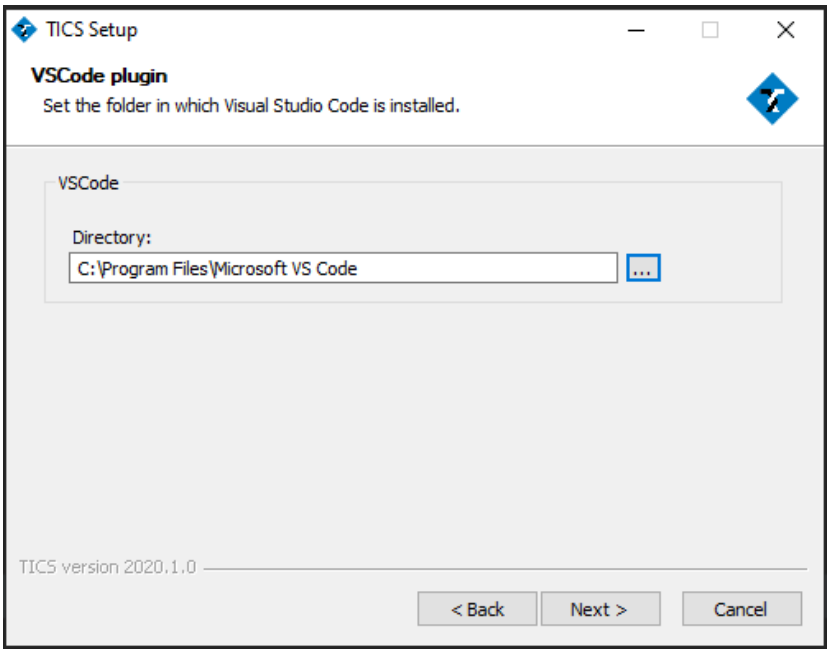
Maintenance After the deployment phase, the next step is to provide support and maintenance for the system, making sure it works perfectly as it should. If users come across any errors, defects or bugs during the process, fixing them is the main aim of this stage. To fix those issues, patches are released

4. Methodology/ Planning of work

Expenses Tracker System is develop using several language. For the interface, HTML

website template. For the programming language, this system used JavaScript language. JavaScript is widely used because it is an open source for general-purpose scripting language, can be embedded into HTML and it suits for Web development. This system used HTML5, CSS and JavaScript for the validation. Validation is important to make sure user have a minimum chance to make mistake when inserting data. Open Source database also used in this system and the database is Mongo DB . React is used for frontend , it is most popular frontend framework along with Tailwind CSS, which is a popular CSS framework. For backend we are using Node JS and Express JS VS Code used for writing and edit the code.

Installing VS code , the first step for development of Expense tracker application , where we can edit and run our code



5. Facilities required for proposed work

System requirement contains of software requirement and hardware requirement. These are needed to ensure the accomplishment of all processes are well covered. So, every aspect required during implementation phase needs to be determined.

5.1 Software Requirement

Google Chrome ,VS Code, MongoDB database, Node JS ,React, Tailwind CSS , Express JS

5.2 Hardware Requirement

CPU, RAM, ROM, Operating System ,Windows

6. References

[1] JavaScript official documentation by MDN Web Docs . Available : https://developer.mozilla.org/en-US/docs/Web/JavaScript

[2] React JS documentation . available : https://react.dev/

[3] Tailwind CSS Documentation available: https://tailwindcss.com/