MINI PROJECT-

REPORT

ON

“EXPENSE INCOME TRACKER”

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DECLARATION

We hereby declare that the work which is being presented in the Mini Project-2 “**EXPENSE INCOME TRACKER”,** in partial fulfillment of the requirements for Mini Project-2 viva voce, is an authentic record of our own work carried by the team members under the supervision of our mentor Mr. Abhishek Kr. Tiwari.

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Year: 3rd

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Certificate

This is to certify that the above statements made by the candidates are correct to the best of my/our knowledge and belief.

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ABOUT THE PROJECT

Our mini project-2 "**EXPENSE INCOME TRACKER**" also known as expense manager and money manager, an expense tracker is a software or application that helps to keep an accurate record of your money inflow and outflow. Using a daily expense manager can help you keep track of how much you spend every day and on what. Expense Income Tracking WebApp objective is to target customer's spending and track their expenses over time. Keeping track of your expenses will help you work within your budget and make strategic investments in your monthly/yearly income.

MOTIVATION

Expense Income Tracker is a project for tracking expenses, but unlike any simple **expense tracker,** the main motivation comes from the fact that my country recently introduced the fiscalization which means that every receipt in the country has a QR code with a link to the website that contains all the information from the receipt.

REQUIREMENTS

a). Software Requirements:

- Technology Implemented: Full Stack Web Development
- IDE Used: Visual Studio Code
- Web Browser: Google Chrome

- GitHub: GitHub is a code hosting platform for version control and collaboration. It lets you and others work together on projects from anywhere. GitHub Repository: A GitHub repository can be used to store a development project. It can contain folders and any type of files (HTML, CSS, JavaScript, Documents, Data, Images). A GitHub repository should also include a license file and a README file about the project. A GitHub repository can also be used to store ideas, or any resources that you want to share.

- Visual Studio Code: Visual Studio Code is a free source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality. Microsoft has released Visual Studio Code's source code on the VS Code repository of GitHub.com, under the permissive MIT License, while the compiled binaries are freeware.

b). Hardware Requirements:

- Processor Required: Intel i5
- Operating System: Windows 10
- RAM: 8GB
- Hardware Devices: Computer System
- Hard Disk: 256GB

ACKNOWLEDGEMENT

We thank the almighty for giving us the courage and perseverance in completing the project. This project itself is an acknowledgement for all those people who have given us their heartfelt co-operation in making this project a grand success. We extend our sincere thanks to Mr. Abhishek Kr. Tiwari, Technical Trainer at “GLA University, Mathura” for providing his valuable guidance at every stage of this project work. We are profoundly grateful towards the unmatched services rendered by him. And last but not least, we would like to express our deep sense of gratitude and earnest thanks giving to our dear parents for their moral support and heartfelt cooperation in doing the main project.

ABSTRACT

As the name suggests, our project is all about a Expense Tracking, which is a software or application that helps to keep an accurate record of your money inflow and outflow. Using a daily expense manager can help you keep track of how much you spend every day and on what. Expense Income Tracking WebApp objective is to target customer’s spending and track their expenses over time. Keeping track of your expenses will help you work within your budget and make strategic investments in your monthly/yearly income.

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2. Technologies Used:

CHAPTER 1

INTRODUCTION

Full Stack Developer is an engineer who works on both client-side and server-side of the software application. This type of developer works on the Full Stack of a software application meaning Front end development, Back end development, Database, Server, API, and version controlling systems. Hence, the name “Full Stack” Developer.

Full stack developer translates user requirements into the overall architecture and implement the new systems. **A Full-Stack Developer doesn’t necessarily master all technologies.** However, the professional is expected to work on the client as well as server sides and understand what is going on when developing an application. He or she should have a genuine interest in all software technologies.

React.js Front End

The top tier of the MERN stack is React.js, the declarative JavaScript framework for creating dynamic client-side applications in HTML. React lets you build up complex interfaces through simple Components, connect them to data on your backend server, and render them as HTML.

React’s strong suit is handling stateful, data-driven interfaces with minimal code and minimal pain, and it has all the bells and whistles you’d expect from a modern web framework: great support for forms, error handling, events, lists, and more.

Express.js and Node.js Server Tier

The next level down is the Express.js server-side framework, running inside a Node.js server. Express.js bills itself as a “fast, unopinionated, minimalist web framework for Node.js,” and that is indeed exactly what it is. Express.js has powerful models for URL routing (matching an incoming URL with a server function), and handling HTTP requests and responses.

By making XML HTTP Requests (XHRs) or GETs or POSTs from your React.js front-end, you can connect to Express.js functions that power your application. Those functions in turn use MongoDB’s Node.js drivers, either via callbacks for using Promises, to access and update data in your MongoDB database.

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PRE-REQUISITES

Hands-on knowledge of JavaScript, HTML and CSS is essential before working on the concepts for making of webpages. Make sure that you have the browser or chrome installed and running before opening website.

CHAPTER 2

TECHNOLOGIES USED

HTML

- HTML stands for Hyper Text Markup Language.
- HTML is the standard markup language for creating Web pages.
- HTML describes the structure of a Web page.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content.
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

CSS

- CSS stands for Cascading Style Sheets.
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media.
- CSS saves a lot of work. It can control the layout of multiple web pages all at once.
- External stylesheets are stored in CSS files.

JAVASCRIPT

JavaScript is a lightweight, cross-platform, and interpreted scripting language. It is well-known for the development of web pages, many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

MATERIAL UI

Material-UI is a **user interface framework** that provides pre-defined and customizable React components for faster and easy web development, these Material-UI components are based on top of Material Design by Google. In this article let’s discuss the Typography component in the Material-UI library.

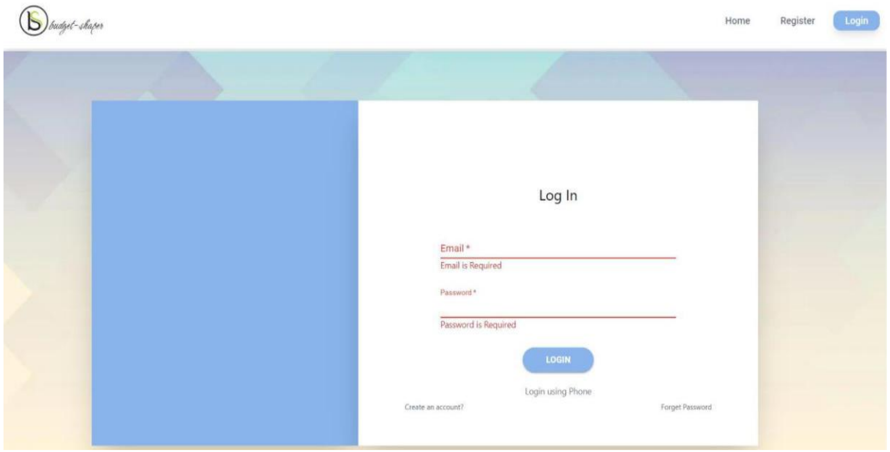
DATABASE –> MongoDB

- MongoDB is a document database with the scalability and flexibility that you want with the querying and indexing that you need. MongoDB stores data in flexible, JSON-like documents, meaning fields can vary from document to document and data structure can be changed over time.
- The document model maps to the objects in your application code, making data easy to work with.

CHAPTER 3

LIST OF FIGURES

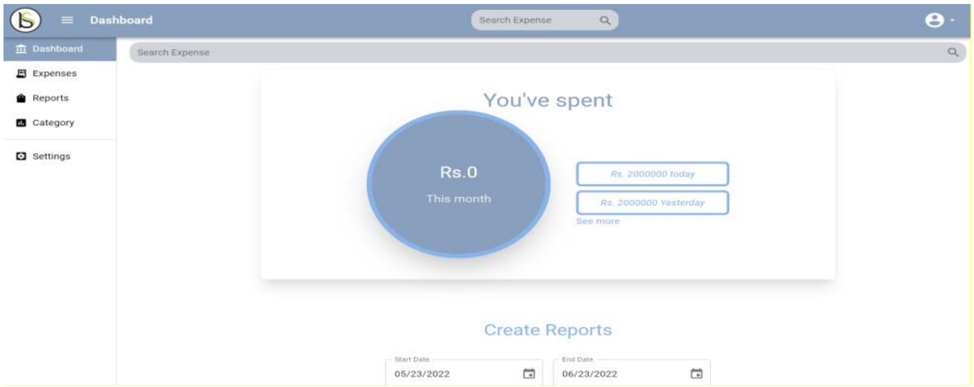
1. Login Page



Email is Required

Password is Required

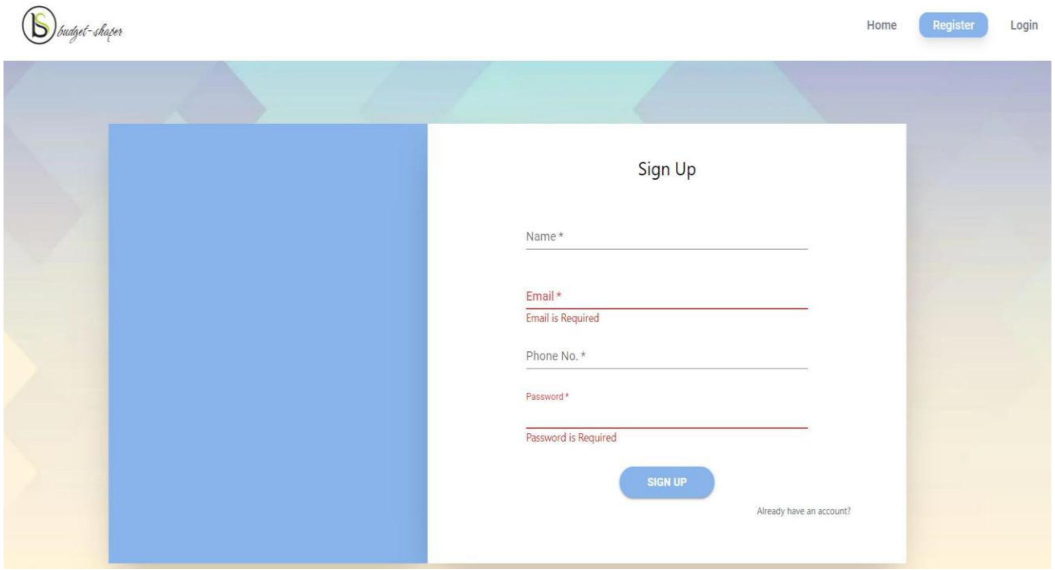
2. Expense report



Start Date 05/23/2022

End Date 06/23/2022

3. Register Page



Sign Up

Name *

Email *

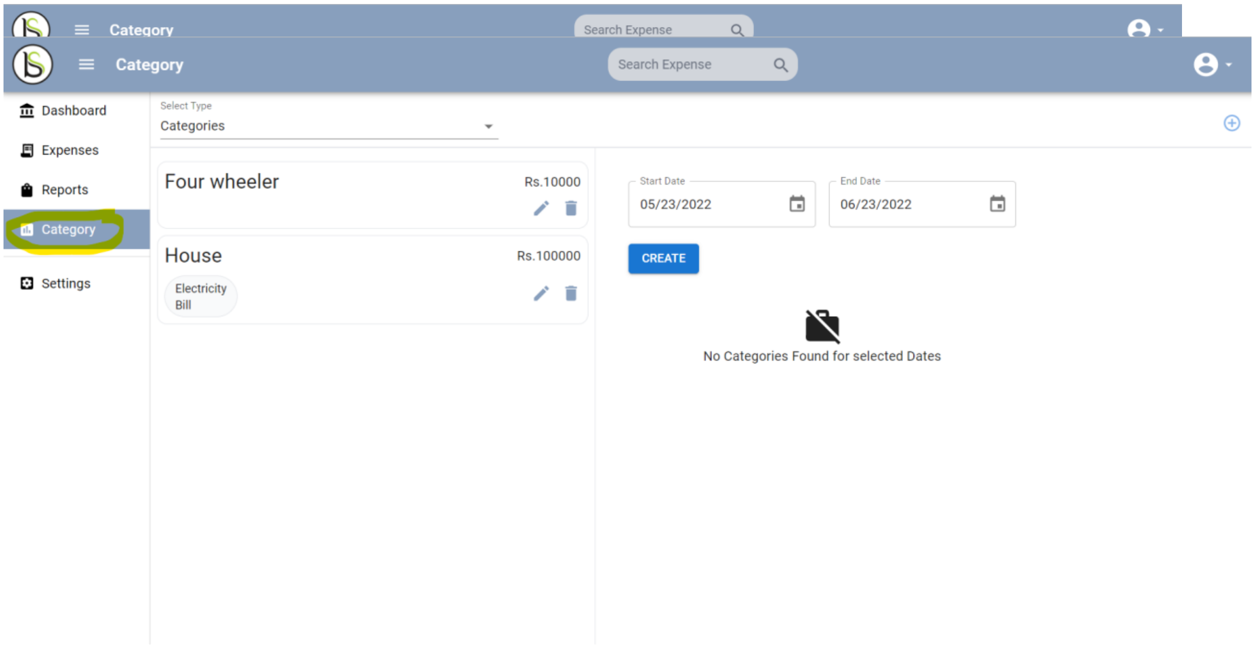
Email is Required

Phone No. *

Password *

Password is Required

4. Category



Select Type: Categories

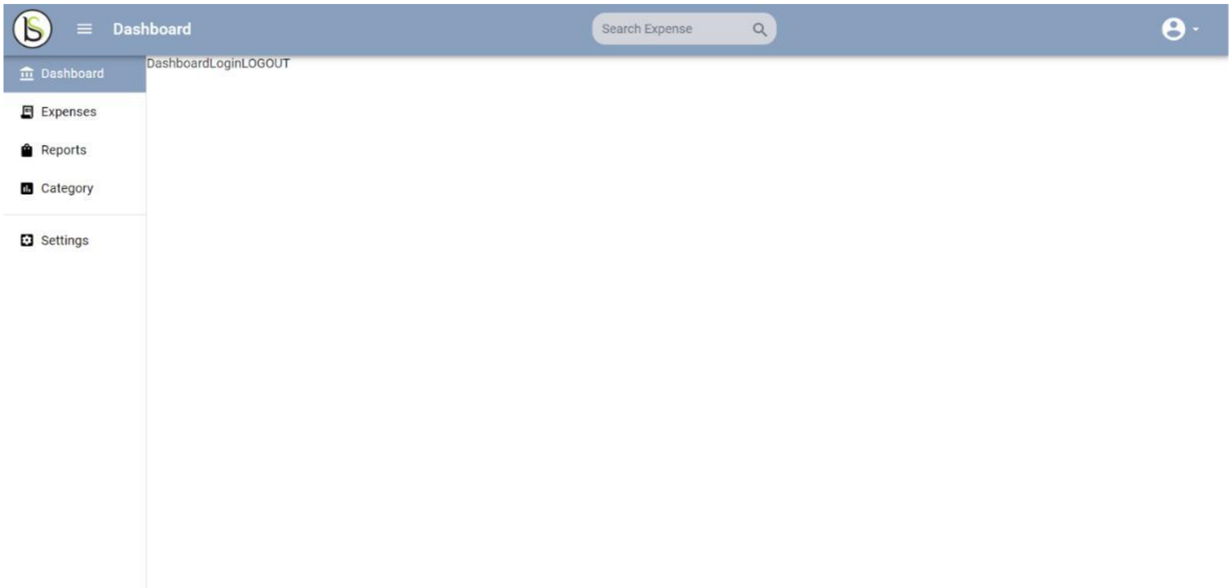
Four wheeler	Rs.10000
House Electricity Bill	Rs.100000

Start Date: 05/23/2022

End Date: 06/23/2022

No Categories Found for selected Dates

5. Dashboard


Dashboard
Search Expense
Dashboard
Expenses
Reports
Category
Settings
DashboardLoginLOGOUT

CHAPTER 4

SOFTWARE TESTING

Once source code has been generated, software must be tested to uncover as many errors as possible before delivery. It is very important to work the system successfully and achieve high quality of software. Testing include designing a series of test cases that have a high likelihood of finding errors by applying software-testing techniques. System testing makes logical assumptions that if all the parts of the system are correct, the goal will be successfully achieved. The system should be checked logically. Validations and cross checks should be there. Avoid duplications of record that cause redundancy of data. In other Words, Testing is the process of evaluating a system or its component(s) with the intent to find whether it satisfies the specified requirements or not. It is executing a system in order to identify any gaps, errors, or missing requirements in contrary to the actual requirements.

The preliminary goal of implementation is to write source code and internal documentation so that conformance of the code to its specifications can be easily verified, and so that debugging, testing and modifications are eased. This goal can be achieved by making the source code as clear and straightforward as possible. Simplicity, clarity and elegance are the hallmark of good programs, obscurity, cleverness, and complexity are indications of inadequate design and misdirected thinking. Source code clarity is enhanced by structured coding techniques, by good coding style, by, appropriate supporting documents, by good internal comments, and by feature provided in modern programming languages. The implementation team should be provided with a well-defined set of software requirement, an architectural design specification, and a detailed design description. Each team member must understand the objectives of implementation.

4.1 TERMINOLOGY

Error The term error is used in two ways. It refers to the difference between the actual output of software and the correct output, in this interpretation, error is essential a measure of the difference between actual and ideal. Error is also to used to refer to human action that result in software containing a defect or fault.

Fault is a condition that causes to fail in performing its required function. A fault is a basic reason for software malfunction and is synonymous with the commonly used term Bug.

Failure is the inability of a system or component to perform a required function according to its specifications. A software failure occurs if the behavior of the software is the different from the specified behavior. Failure may be caused due to functional or performance reasons.

4.2 TYPES OF TESTING

a. Unit Testing The term unit testing comprises the sets of tests performed by an individual programmer prior to integration of the unit into a larger system. A program unit is usually small enough that the programmer who developed it can test it in great detail, and certainly in greater detail than will be possible when the unit is integrated into an evolving software product. In the unit testing the programs are tested separately, independent of each other. Since the check is done at the program level, it is also called program teasing.

b. Module Testing A module and encapsulates related component. So can be tested without other system module.

c. Subsystem Testing Subsystem testing may be independently design and implemented common problems are sub-system interface mistake in this checking we concenton it. There are four categories of tests that a programmer will typically perform on a program unit.

Functional Test Functional test cases involve exercising the code with Nominal input values for which expected results are known; as well as boundary values (minimum values, maximum values and values on and just outside the functional boundaries) and special values.

Performance Test Performance testing determines the amount of execution time spent in various parts of the unit, program throughput, response time, and device utilization by the program unit. A certain amount of avoid expending too much effort on fine-tuning of a program unit that contributes little to the overall performance of the entire system. Performance testing is most productive at the subsystem and system levels.

Stress Test Stress test are those designed to intentionally break the unit. A great deal can be learned about the strengths and limitations of a program by examining the manner in which a program unit breaks.

Structure Test Structure tests are concerned with exercising the internal logic of a program and traversing particular execution paths.

CHAPTER 5

CONCLUSION

We have completed our project within time limit with the coordination of our team members under the supervision of our mentor Mr. Abhishek Kr. Tiwari.

Our project repository is available at:-

https://github.com/Himanshubansal155/expense-tracker

https://github.com/Himanshubansal155/expense-tracker-backend

Live Link –

https://expense-9458-tracker.netlify.app/

CHAPTER 6

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