

## Expenditure Tracking System

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### **Abstract:**

*Expenditure tracking system is an attempt to manage our daily expenditures in a more efficient and manageable way. The system attempts to free the user with as much as possible the burden of manual calculation and to keep the track of the expenditure.*

*Instead of keeping a diary or a log of the Expenditures on the smart phones or laptops, this system enables the user to keep the tab on the Expenditures. Each user will be required to register on the application. At registration time, the user will be provided with a key id, which will be used to maintain the record of each unique user. The system allows adding past or future income and Expenditures to a calendar that calculates the impact on your balance, as well as spending by category. As soon as the entry is made about the Expenditure, the database is updated and per the nature of the category amount deduction or addition to the total balance in the user's pocket is made.*

*Add-ons like notifying the user after a certain time about the product again, checking and notifying expiring of products (example: medicines, grocery), notifications on exceeding the Expenditures beyond limit for the day, etc. The user finds it more easy to understand and incorporate for future planning.*

**Keywords:** *Expenditure management, Expenditure report, Purchase reminder, Maintenance management, Accounting, Cut Expenditure costs, Expenditure planning solution.*

### **1: INTRODUCTION:**

#### **1.1 Goals:**

The objective behind this solution is to design a refined system which will allow the user to efficiently manage his or her Expenditures with ease.

#### **1.2 Problem Statement:**

At the instant, there is no as such complete solution present easily or we should say free of cost which enables a person to keep a track of its daily expenditure easily. To do so a person must keep a log in a diary or in a computer, also all the calculations needs to be done by the user which may sometimes results in errors leading to losses.

#### **1.3 Proposed Solution:**

To fix the above addressed problems, we tried to design a system that would make the task of keeping the Expenditures in check, efficient and delight task. Each user will be required to register on the application. At registration time, the user will be provided with a key id, which will be used to maintain the record of each unique user. The system allows adding past or future income and Expenditures to a calendar that calculates the impact on your balance, as well -as spending by category. As soon as the entry is made about the Expenditure, the database is updated and per the nature of the category amount deduction or addition to the total balance in the user's pocket is made. Add-ons like notifying the user after a certain time about buying the product again, checking and notifying expiring of products (example: medicines), notifications on exceeding the Expenditures beyond limit for the day, etc. There is also an option to view and Expenditures which adds or gets

deducted from the overall budget accordingly without bothering the user.

## Literature survey

### 1. Financial Calculators

Financial Calculators is a vital tool when figuring out your budget for the future. The app is essentially a collection of calculators that can help you figure out various things. For instance, it has a loan calculator so you can see what your payments and interest will be like. This app has around three or four dozen calculators in total that range from home buying to fixed vs adjustable rate and even a return-on-investment calculator. It won't manage your money, but it'll help you make fewer bad decisions on upcoming purchases. It's one of the must-have budget apps.[1]

### 2. Goodbudget

Good budget is a popular app for budgeting. It features cross-platform support so you can check it out on Android, the web, or iOS if you want to. Everything syncs between those platforms. Additionally, you'll get Expenditure tracking, income tracking, and some other decent budgeting tools. It uses Material Design and it looks lovely. You can also export your data as a CSV file, QFX (for Quicken), and OFX (Microsoft Money) in case you need that. It's one of the simpler budget apps. It's also free to download and use on Android.[2]

### 3: MoneyManager

The simply named Money Manager is an effect app for budgeting money. It features a more visual experience so you can see where your money is going instead of just reading numbers. You'll also get a passcode lock, asset management, instant stats, and up to the moment bookkeeping. You can also backup and restore your data in case you need to switch devices. It also outputs to an Excel spreadsheet format if you need that. It uses Material Design. That makes the UI look good. It's free to download with the pro version going for \$3.99.[3]

### 4: Mint.com

This popular app gives you all the tools you need to manage your earnings, spending, saving, and

budgeting. It syncs up all your accounts, from bank accounts and mutual funds to your 401(k) or IRA.

Each section is intuitively organized to give you the big picture of your finances. The Updates section includes all transactions (recent and unauthorized) and how you've been using your accounts. In Overview, you can get account totals, monthly budget, credit score (get a free one when you sign up), alerts for where you went over budget, and spending broken down by category.

Mint shows your cash flow in real time, including deposits, expenses, credit card debts, and other investments. This format is great if you're especially into using your debit or credit cards for all purchases, but it also works with cash if you enter every purchase.

In addition to adding up all your accounts, and outlining budget and savings goals, Mint analyzes your spending habits, helping you pinpoint areas where you can potentially save. If you're forgetful about balances, you can set a low-budget alert and Mint will email or text when you hit it.[4]

## IMPLEMENTATION

**Register:** While registering new user, the user should possess some requirements. User should give his Name, Email Id, Password, Phone Number. After giving all valid information the user should press the submit button.

**Login:** After registering in the system, the user must login with his email id and password. After login into the system, the system displays the home page. The user is supposed to enter the Email id which was used to register and the password. This protects from scammers and protects the user information.

**Adding Expenditures:** After login into the system, the user can select the add Expenditures option on the home page. User selects the category then the system shows different categories. Then the user can enter the

item name, item price and the date at which he purchased the item.

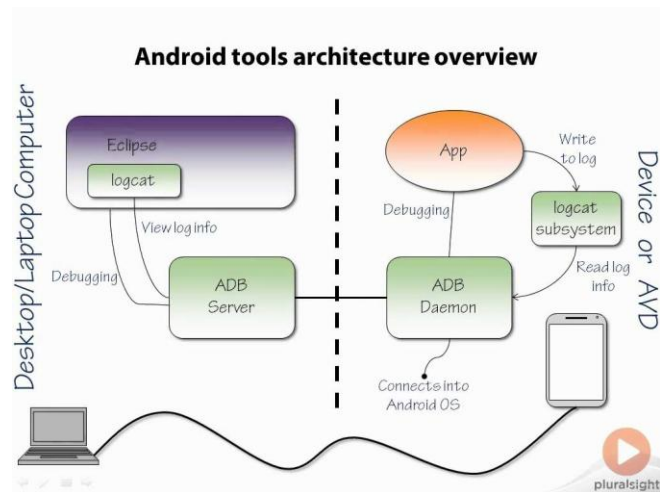
**Track Expenditures:** After adding the Expenditures, the user can track his Expenditures by selecting the track Expenditures option on the home page. In the track Expenditures, it will load all the Expenditures which you have done in a form of list. From the list, you can select the item name, date of the required item.

### Setting Limits and Updating the Phone number:

On the home page, when you select the set limit option, you can give the minimum and maximum Values for the day and month and even the user can update his phone number for getting the message on that number regarding the Expenditures by selecting that option.

### Methodology

#### Android Architecture:



### ANDROID

Android [5] is a mobile operating system developed by Google, based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. Android's user interface is mainly based on direct manipulation, using touch gestures that loosely correspond to real-world actions, such as swiping, tapping and pinching, to manipulate on-screen objects, along with a virtual keyboard for

text input. In addition to touchscreen devices, Google has further developed Android TV for televisions, Android Auto for cars, and Android Wear for wrist watches, each with a specialized user interface.

Variants of Android are also used on notebooks, game consoles, digital cameras, and other electronics.

Android has the largest installed base of all operating systems (OS) of any kind. Android has been the best-selling OS on tablets since 2013, and on smartphones it is dominant by any metric.

### ANDROID STUDIO

Android Studio is the official integrated development environment (IDE) for Android platform development. It was announced on May 16, 2013 at the Google I/O conference. Android Studio is freely available under the Apache License 2.0. Android Studio was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0. Based on Jet Brains' IntelliJ IDEA software, Android Studio [6] is designed specifically for Android development.

It is available for download on Windows, Mac OS X and Linux, and replaced Eclipse Android Development Tools (ADT) as Google's primary IDE for native Android application development. The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard.

Features of Android Studio: New features are expected to be rolled out with each release of Android Studio. The following features are provided in the current stable version:

- Gradle-based build support.
- Android-specific refactoring and quick fixes.

- Lint tools to catch performance, usability, version compatibility and other problems. ProGuard integration and app-signing capabilities.
- Template-based wizards to create common Android designs and components.
- A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configurations.
- Support for building Android Wear Apps Built-in support for Google Cloud Platform, enabling integration with Google Cloud Messaging and App Engine.

### SQLite:

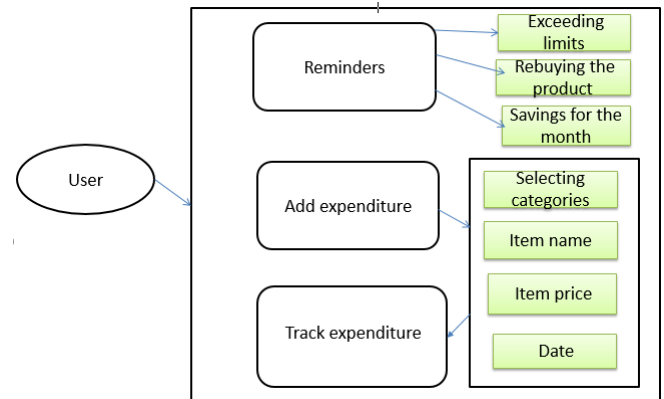
SQLite is a relational database management system contained in a C programming library. In contrast to many other database management systems, SQLite is not a client-server database engine. Rather, it is embedded into the end program. SQLite is ACID-compliant and implements most of the SQL standard, using a dynamically and weakly typed SQL syntax that does not guarantee the domain integrity.

SQLite is a popular choice as embedded database software for local/client storage in application software such as web browsers. It is arguably the most widely deployed database engine, as it is used today by several widespread browsers, operating systems, and embedded systems (such as mobile phones), among others. SQLite has bindings to many programming languages.

### Features of SQLite

- SQLite implements most of the SQL-92 standard for SQL but it lacks some features.
- SQLite uses an unusual type system for an SQL-compatible DBMS; instead of assigning a type to a column as in most SQL database systems, types are assigned to individual values; in language terms, it is *dynamically typed*.

### Results:



### Conclusion:

Expenditure tracking system is a project which is useful for every individual to keep a track on their expenses and utilize their money efficiently. The user finds it more easy to understand and incorporate for future planning.

### References:

- [1]<https://play.google.com/store/apps/details?id=com.financialcalculators>
- [2]<https://play.google.com/store/apps/details?id=com.Goodbudget>
- [3]<https://play.google.com/store/apps/details?id=com.MoneyManager>
- [4]<https://play.google.com/store/apps/details?id=com.Mint.com>
- [5]AndroidStudio:<https://developer.android.com/develop/index.html>
- [6]Android Programming : The Big Nerd Ranch Guide by Bill Phillips and Brian Hardy