

AMENDSPRO

PROJECT REPORT

By

**KAVIN PRASATH S
KUMARA GURUBARAN M
MOHAMMAD MUDHAKKIR I**

Submitted as team
HALT AND CATCH FIRE

In partial fulfillment for the submission

of

IBM HACK CHALLENGE 2022

TABLE OF CONTENT

CHAPTER NO	TITLE
1.	INTRODUCTION
2.	PROJECT ANALYSIS
3.	SYSTEM SPECIFICATION
4.	CONCLUSION AND FURTHER ENHANCEMENT REFERENCES

CHAPTER 1

INTRODUCTION

ABSTRACT:

Making money is one thing, but the ability to control it is crucial. With the modern methods of digital payments, every store, every person has adopted to use their mobile phones to pay their expenses rather than a currency bill or a card. So, keeping track of money and how one spends it has become a crucial task, most people don't even understand how basic and easy it is to understand where their money goes and make further judgements based on their past tracks. To address these issues we have come up with a solution that lets you track what you spent your money on, be hassle of your due dates with the built-in alert system, make comparisons with your past expenses, understand how the price of a product varies from time to time, save time and avoid having to repeat yourselves on writing a same shopping list over and over again. Our solution is simple, set your monthly budget and see yourself become the master of your expenses.

Businesses and consumers are banking on the Internet in more than one sense. Despite the early proliferation of electronic banking applications on private networks through dial-up services, most electronic banking applications have migrated to the Internet. Consumers will not be tied to one particular bank and its software, nor to a single terminal where the bank's own software must be installed. Banking on the Internet provides the flexibility of banking from any Internet access terminal using the now ubiquitous Web browser. Banking on the Internet can reduce the number of staff banks must maintain without having to make the investment in establishing private networks. The World Wide Web, or the Web, and its user-friendly, graphically rich browsers have made the Internet both friendly and accessible to the common desktop user at home and in the office.

The advancement of the electronic banking or commonly known e-banking, began with the use of ATMs and has included telephone banking, Direct bill payment, electronic fund transfer, online banking and other electronic transactions. These open development opportunities provides an advanced option to implement a billing system along side with a stock management service which interacts under the hood to provide updated and useful stock information in no time.

PROJECT ANALYSIS

EXISTING SYSTEM

The existing system are using books, ledgers, spreadsheets etc.to store the records of the stocks and payment dues. The current system is acting like calculator for calculating the total sale and number of stocks available in company which requires more manual hours to do and cannot generate the required report for the company. This leads to lack of maintenance in the historical data of the store, also the storekeeper may place duplicate orders cand the stock record is not maintained properly. As following these methods, it consumes more time and effort for updating the stocks, the efficiency and accuracy cannot be expected because they are done manually and may have error. Also the system requires separate applications to manage stocks and bills hence there is a lack of initial update in the stock data and due data and requires additional manual work for up-to-date stock information and keeping track of dues each customer has to pay.

DRAWBACKS OF EXISTING SYSTEM

- It is tedious to maintain the historical data of customers.
- It takes more manual hours for generating required reports.
- There is chance of having duplicate orders in the store.
- It requires man power for calculation and maintain the records.
- It consumes large volume of paper work.
- There is no continuous supply of stocks to customer.
- Efficiency and accuracy may not be expected has they are done manually.
- It takes more time for updating the records.

PROPOSED SYSTEM

The proposed system provides a solution to all the drawbacks in the Existing systems. By including a hybrid billing and invoice system, the stocks will be now up-to-date without the need of additional manual work. Including a Dashboard for simple and complex statistics is much more user interactive with features like the Profit, Stock Alert and Most Sold stock indicator. This all in one dashboard makes way for the user to easily understand and make use of the application. Keeping in mind the essentials, the proposed system also persists the traditional features.

ADVANTAGES OF PROPOSED SYSTEM

- It is easy to update the product stocks.
- No manual work is required for generating the report.
- No man power is required for calculation and maintaining the due records and other details.
- Ease of access with records over a course of time.
- Customers can make purchases from the comfort of their home.
- Easy to maintain the historical data.
- Easier analysis generation helps users have better understanding about their money.
- Easy to use GUI no specific training is required to use the application.
- Minimum knowledge required for shop owners for the success performance of the app.

UNIQUENESS & NOVELTY

Every app in the market has its own approach to help you keep track of your money, one lets you make an alert system to control your budget, other lends no control over your money while instructing you what have to do with your money. In our case, all we do is help you have control over your money by yourself. Five steps and that's all it takes to know your money.

Initiate Your Budget:

Decide how much you would like to spend this month and set your budget.

Check your Shopping List:

Let's make a quick check if your shopping list is right for your budget.

Keep track of your dues:

Partial payments? No issues, we label your payments for your convenience and alert you when it's due.

Save your Shopping list:

Finding yourself repeating the same shopping list over and over again? Pin your shopping list and the next you need it, it's one click away from purchase.

Compare your expenses:

Compare your current expenses with your past expenses and see how you've progressed so far. This section provides you a clear analysis including the price variance of the products you bought so you make better decisions next time.

Export your records:

Take your records offline whenever you need with a single click.

SYSTEM SPECIFICATION

SOFTWARE DESCRIPTION

Environment	: Web-based application
Front end	: HTML, CSS, Javascript
Back end	: Python Flask
Database	: Sqlite
Additional	: Docker

PYTHON:

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed. Python is used for server-side web development, software development, mathematics, and system scripting, and is popular for Rapid Application Development and as a scripting or glue language to tie existing components because of its high-level, built-in data structures, dynamic typing, and dynamic binding. Program maintenance costs are reduced with Python due to the easily learned syntax and emphasis on readability. Additionally, Python's support of modules and packages facilitates modular programs and reuse of code. Python is an open source community language, so numerous independent programmers are continually building libraries and functionality for it.

HTML5:

HTML stands for Hyper Text Markup Language. It is used to design web pages using markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. Markup language is used to define the text document within tag which defines the structure of web pages. HTML 5 is the fifth and current version of HTML. It has improved the markup available for documents and has introduced application programming interfaces(API) and Document

Object Model(DOM).

PYTHON FLASK:

Flask is a web framework that provides libraries to build lightweight web applications in python. It is developed by Armin Ronacher who leads an international group of python enthusiasts (POCCO). It is based on WSGI toolkit and jinja2 template engine. Flask is considered as a micro framework.

SQLITE:

SQLite is a database engine written in the C programming language. It is not a standalone app; rather, it is a library that software developers embed in their apps. As such, it belongs to the family of embedded databases.

JAVASCRIPT:

JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. JavaScript is high-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

CSS:

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

SQL:

SQL, (Structured Query Language) is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). It is particularly useful in handling structured data, i.e. data incorporating relations among entities and variables. SQL offers two main advantages over older read–write APIs such as ISAM or VSAM. Firstly, it introduced the concept of accessing many records with one single command. Secondly, it eliminates the need to specify how to reach a record, e.g. with or without an index

CONCLUSION AND FURTHER ENHANCEMENT

BUSINESS IMPACT:

What better way to attract customers than an all in one application that benefits you and them with no extra work. You do you and let us help improve your customer response on the side. With our solution your customer gets the hassle free benefit to buy products through partial payments and you get to keep track of what your users buy on a large scale and on what basis, which provides you, the business person a clean advantage over your competitors. Simply switching to a digital world is all you need to do, when you do so why not do it the right and easy way? Your everyday routine simplified.

SCOPE OF THE WORK:

Empathize :

- Understanding what problems do people face getting their business to perform well online and the difficulties a person tends to face when it comes to managing their money especially with all the new technology kicking in.
- We'll have to Google to look up surveys and understand the problems faced by the majority.
- Meeting with shop owners and their customers in person will lend us a great helping hand to understand what people think when it comes to digitalizing their expenses.

Define :

After understanding what people had to say, we as a team have to come up with a proper statement of the problem in hand, in order to arrive at a proper solution.

Ideate :

Once the problem at hand is understood and defined, We'll then move on to start thinking of how people can be freed from their problems of digitalizing their expenses. During this phase we'll use UI tools like Figma to create a user friendly design that people will love to spend time working on.

Prototype :

Since we are running short on time in the hackathon we'll have to get a quick survey from a little group of

people who have idea about the UI and who doesn't. After this we'll start the development phase of the project where we'll use HTML, CSS and Bootstrap to implement the front end of the application while writing the backend in Python Flask and designing the database with Sqlite.

Testing :

After deployment, we'll test the application for bugs and errors to ensure proper functioning of the application.

CONCLUSION

Today's market is a customer-oriented market and customer satisfaction is the most important goal of every organization therefore it is inevitable to adopt integrated Inventory Management approach for new product development strategy. Financial –Material management for any product is a dynamic decision-making process involving a series of inter-related activities. In today's dynamic market "Money is Where the Mind Is.". In order to remain in market any organization needs to define the process, Benchmark for the excellence, endeavor to achieve it by strategizing & creating environment, providing required resources & effective monitoring.

Finance system is an extremely important problem area in the management of materials handling. It is quite susceptible to control and a very large number of scientific models are available in the literature to enable us to choose an optimal inventory policy. Buying the optimal quantity can result only from a sound inventory control system that is achieved by judicious reconciliation of conflicting costs and departmental objectives. However, inventory is only an indicator of performance of materials management function and to cut down inventories we use not only scientific inventory management principles but also models along with it also take long-term measures to reduce inventories through strategies such as variety reduction and standardization, source development and optimization, and vendor rating, lead time reduction through improvement in the systems and procedures of procurement. It is obvious that inventory management has to be practiced selectively rather than indiscriminately to make it cost-effective. It is also important to have Informational inputs like demand forecast, lead-time estimate, and other cost estimates to be realistic to make effective use of inventory models.

REFERENCE:

- [1] P. Loganthurai, M. Shalini, A. Vanmathi, M. Veeralakshmi, and V. Vivitha, "Smart energy meter billing using GSM with warning system," in 2017 IEEE International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS), 2017, pp. 1-4: IEEE.
- [2] V. K. Sehgal, N. Panda, N. R. Handa, S. Naval, and V. Goel, "Electronic Energy Meter with instant billing," in 2010 Fourth UKSim European Symposium on Computer Modeling and Simulation, 2010, pp. 27-31: IEEE.
- [3] S. Shahidi, M. A. Gaffar, and K. M. Salim, "Design and implementation of digital energy meter with data sending capability using GSM network," in 2013 2nd International Conference on Advances in Electrical Engineering (ICAEE), 2013, pp. 203-206: IEEE.
- [4] M. Zeyad, S. Ghosh, and S. M. Ahmed, "Design prototype of a smart household touch sensitive locker security system based on GSM technology," *International Journal of Power Electronics and Drive Systems*, vol. 10, no. 4, p. 1923, 2019.
- [5] M. Zeyad, S. Ghosh, M. R. Islam, S. M. Ahmed, and S. R. Shoshi, "Proposing a Technique of a Low Cost Automatic Cooling and Exhaust System for Old Age Home Kitchen", in 2019 IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), 2019, pp. 1-5: IEEE.
- [6] M. Zeyad, P. Biswas, M. Z. Iqbal, S. Ghosh, and P. Biswas, " Designing of Microcontroller Based Home Appliances Governor Circuits," *International Journal of Computer and Electrical Engineering (IJCEE)*, vol. 10, no. 2, p. 94-105, 2018.
- [1] R Krüger.(2016) Contextualising Computer-Assisted Translation Tools and Modelling Their Usability[J]. *Transkom*, 9(1):114-148.
- [2] Park K. (2016) A Constraint on Lexical Transfer: Implications for Computer-Assisted Translation (CAT)[J]. *Journal of the Korea Society of Computer and Information*, 21(11):9-16.
- [3] Samad S S, Mohammed O S, Mahdi H S. (2020) The attitudes of professional translators and translation students towards computer-assisted translation tools in Yemen[J]. *Dil ve Dilbilimi Çalışmaları Dergisi*, 16(2):1084-1095.
- [4] Bell T. (2019)TAUS New York speakers say translation's biggest problem isn't tech—it's people [J]. *Multilingual Computing & Technology*, 30(4):9-9.
- [5] Bundgaard K, Christensen T P, Schjoldager A.(2016) Translator-computer interaction in action—an observational process study of computer-aided translation[J]. *The Journal of Specialised Translation*, (25):106-130.
- [6] MÁ Jiménez-Crespo, M Tercedor Sánchez.(2017) Lexical variation, register and explicitation in medical translation: A comparable corpus study of medical terminology in US websites translated into Spanish[J]. *Translation and Interpreting Studies*, 12(3):405-426.
- [7] Tracey D.(2018) An Early History of Medical Translation[J]. *Journal der Deutschen*

Dermatologischen Gesellschaft, 16(10):1300-1301.

[8] Dalton-Oates B M.(2017) Medical translation: The neglected human right [J]. International Journal of Human Rights in Healthcare, 10(4).

[9] Ali L, Milani M.(2019) Medical writing and medical translation - two crossing paths [J]. Medical Writing, 28(1):42-45.

[10] Cai Y, Guo P.(2020) The Application of Actor Network Theory in Medical Translation[J]. Open Journal of Modern Linguistics, 10(5):599-605.

[11] Muoz-Miquel A, V Montalt, I García-Izquierdo.(2020) Fostering Employability through Versatility within Specialisation in Medical Translation Education[J]. Hermes (Denmark), 60:141-154.

[12] Tracey D. (2018) An Early History of Medical Translation[J]. Journal der Deutschen Dermatologischen Gesellschaft, 16(10):1300-1301