### Project Title:

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| Billing System |  |
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### Statement about the problem:

In today’s fast-paced society, it’s very hard to be competitive without using cutting-edge technology available in the market. After years of business, the data has grown much. It is becoming a challenge for a person to manage that data effectively.

To be more productive in order processing, he needs a solution that can facilitate their current processes with the use of technology and software. With the increased number of orders, it is becoming difficult for a salesperson to manage orders effectively and efficiently.

It is very hard to go through all the paperwork and backtracking orders. If there is any complaint or review of any order, it takes a large amount of effort and time to backtrack and fix the problem.

This results in loss of resources, increased time, and low output.

### Why is the Billing System chosen?

Billing System can be very useful within a business environment. Instead of doing manual work for making up a bill at grocery shops, which gets tiring and time-consuming, you can generate a bill including tax in just a few clicks. When making up a bill manually at a departmental store may contain some human errors like adding wrong items to the bill or summing up their total also may end up wrong, it also sometimes results in a Bad Impression to the customer. Ideally, the users should be able to generate bills without any mistakes and quickly, enabling them to fasten or improve their process. To overcome this problem, we have come up with this project, that is, Billing System.

### Objective and scope of the project:

The Billing System will be a system to automate the process of billing a store. The grocery / departmental store is the place where customers come to purchase their daily using products. So, there is a need to calculate how many products are sold, GST and discounts to generate the bill for the customer.

This system will be built for fast data processing and bill generation for customers. The users will consume less time in calculation and the sales activity will be completed within a fraction of seconds whereas a manual system will make the user write it down which is a long procedure and it also consumes a lot of time. Because of this software, paperwork will be reduced. The project will be user-friendly and easy to use. This project will be helpful in computerizing the bill report and then generating the bill.

A product when billed will have to be selected by entering its quantity and its price will have to be added to the bill based upon the product quantity. The system will also contain discounts on various products so that the product is offered at discounted price while billing. The billing system will be built to help stores calculate and display bills and serve the customer in a faster and more efficient manner. This software project will consist of an effective and easy GUI to help the employees with easy bill calculation and provide efficient customer service.

***Salient features of billing system:***

* Paperwork reduction.
* Calculate Products Price.
* Calculate Tax on Behalf of Product Category.
* Compliance with GST.
* Instant invoices.
* All Validations no duplicated record insert.
* Prevent errors in the compilation of bills and invoices.
* Maintain a record of all bills and invoices.
* Search Bill Records.

**Methodology:**

Microsoft Visual Studio will be used for implementation of this Billing System which is one of the latest programming software used now with modern features. It is an integrated development environment from Microsoft. It is used to develop computer programs, as well as websites and mobile apps.

The Billing System will all be coded in Python. It is a computer programming language often used to build websites and software, automate tasks, and conduct data analysis. Python is a general-purpose language, meaning it can be used to create a variety of different programs and isn't specialized for any specific problems.

We will be using Python version 3.9, which was first released in Oct 2020.

We plan to save all the generated bills in .txt format as Notepad files.

### Hardware & Software to be used:

The software and the hardware to be used for developing the project and implementing the project are:

**A. Software Requirements:**

1. Python 3,9
2. Notepad
3. Any OS

**B. Hardware Requirements:**

1. 2 GB RAM or above
2. Intel i3 Processor or above

3. 32 Bit System or above

### What contribution would the project make:

The Billing System will be very useful to small businesses or restaurants or cafes or food truck owners. This will help the owners to fasten the process which is bug-free and easy to use. It also will have a calculator to ease the use of the user. This project firstly will have the menu and then it will add up the selected items by customer and will sum up the total of all items with tax and service charges and then display the total amount. The grocery industry is enlarging rapidly and owners are keen to improve every section of their business. Though much attention is paid to digitalizing the management and the menu, not many business owners realize the importance of applying digital billing software in grocery shops. It upgrades the billing process and uplifts the customers' experience. It enables customers to pay bills more easily.

The software will be able to generate detailed bills that eliminate the need to calculate bills separately when the guests wish to know the total GST amount. Apart from billing, the software will enable you to organize several processes at the grocery shops. It will make your system more effective and helps you provide faster and easy services to the customers. So many times, customers leave unhappy due to improper billing. When the crowd is vast in the grocery shops, it might take you some time to generate manual bills that may leave your customers unsatisfied. This is where the automated billing system can be used. It will generate digital bills automatically and allows customers to make quick payments.

### The schedule of the project

### (Gantt chart/ PERT chart):

### Graphical user interface, application Description automatically generatedGraphical user interface, application Description automatically generated

**References/Bibliography:**

**[1]** Noor Azah Samsudin, Shamsul Kamal Ahmad Khalid, Mohd Fikry Akmal Mohd Kohar, Zulkifli Senin, Mohd Nor Ihkasan; “A Customizable Wireless Food Ordering System with Real-Time Customer Feedback.”; 2011 IEEE Symposium on Wireless Technology and Applications (ISWTA), September 25-28, 2011, Langkawi, Malaysia.

**[2]** Sakari Pieskä, Markus Liuska, Juhana Jauhiainen, and Antti Auno of Centria University of Applied Sciences Ylivieska; “Intelligent Restaurant System Smart Menu That Digital Technology”; coginfocom 2013 4th IEEE International Conference on Cognitive Info-communications December 2–5, 2013, Budapest, Hungary.

**[3]** Ching-chang, Chechen Kung, Tan-Hsu Tan,” Development and Implementation of an E-Restaurant for Customer-Centric Service Using Wlan and Rfid Technology”, Proceedings of the Seventh International Conference On Machine Learning And Cybernetics, Kunming, 12-15 July 2008.