



Graphic Era
HILL UNIVERSITY

Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)

Project Report

on

Supermarket Billing System

Submitted in partial fulfilment of the requirement for the III semester

Bachelor of Technology

By

Ayush Maheshwari

University Roll No.: 2018265

Class Roll No./Section: 15/C

2021-2022

DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY

GRAPHIC ERA HILL UNIVERSITY, DEHRADUN

DECLARATION

I, **Ayush Maheshwari** student of **B-tech, Semester 3**, Department of Computer Science and Engineering, Graphic Era Hill University, Dehradun, declare that the technical project work entitled “**Supermarket Billing System**” has been carried out by me and submitted in partial fulfillment of the course requirements for the award of degree in B- tech of **Graphic Era Hill University** during the academic year **2021-2022**. The matter embodied in this synopsis has not been submitted to any other university or institution for the award of any other degree or diploma.

Date: 24/02/2022



Graphic Era
HILL UNIVERSITY

Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)

CERTIFICATE

This is to certify that the project report entitled **“Supermarket Billing System”** is a bonafide project work carried out by **Ayush Maheshwari, Roll No.: 2018265**. in partial fulfillment of award of degree of B- tech of Graphic Era Hill University, Dehradun during the academic year 2021-2022. It is certified that all corrections/suggestions indicated for internal assessment have been incorporated. The project has been approved as it satisfies the academic requirements associated with the degree mentioned.

Mr. Naveen Garg
HOD (Computer Science)

ACKNOWLEDGEMENT

Here by I am submitting the project report on **“Supermarket Billing System”** as per the scheme of Graphic Era Hill University, Dehradun.

I would like to express our sincere gratitude to **Mr. Naveen Garg**, Head of Dept. of Computer Science, for providing a congenial environment to work in and carry out our project.

I consider it mine cardinal duty to express the deepest sense of gratitude to **Ms. Manisha Aeri** Asst. Professor, Department of Computer Science and Engineering for the invaluable guidance extended at every stage and in every possible way for helping me in better understanding each component of topic in an interesting way.

Finally, I am very much thankful to all the faculty members of the Department of Computer Science and Technology, friends and our parents for their constant encouragement, support and help throughout the period of project conduction.

Ayush Maheshwari

University Roll No.: 2018265

Class Roll No./Section: 15/C

INTRODUCTION

Today, the world is entering to the new phase of life with modern technology, everything in this world now can be converted into automation.

Supermarket billing system is the system to automate the process of ordering and billing of a supermarket store. Supermarket is the place where customers come to purchase their daily using products and pay for that. So there is a need to calculate how many products are sold and to generate the bill for the customer.

This system is built for fast data processing and bill generation for supermarket customers. It also allows the customer to purchase and pay for the items purchased. The users will consume less time in calculation and the sales activity will be completed within a fraction of seconds whereas in a manual system will make the user to write it down which is a long procedure and it also consumes a lot of time.

This project will be user friendly and easy to use. This project is helpful to computerize the bill report and generating the items details. The billing data is a vast collection of product name, price and other product specific data. A product when billed is searched and its price is added to the bill based upon the product quantity. The system also contains discounts on various products so that the product is offered at discounted price while billing.

The supermarket billing system is built to help supermarkets calculate and display bills and serve the customer in a faster and efficient manner. This software project consists of an effective and easy GUI to help the employees in easy bill calculation and providing an efficient customer service.

PROBLEM STATEMENT

In today's world, it's very hard to be competitive without using cutting-edge technology available in market. After years of business, the data has grown much. It is becoming a challenge for person to manage that data in an effective way. To be more productive in order processing, he needs a solution which can facilitate their current processes with use of technology and software. With increased amount of orders, it is becoming difficult for salesperson to manage orders in effective and efficient manner. It is very hard to go through all paper work and backtracking orders. If there is any complain or review of any order, it takes large amount of effort and time to backtrack and fix the problem. This results in loss of resources, increased time, and low output.

AIM :

To make software fast in processing, with good user interface so that user can change it and it should be used for a long time without error and maintenance.

OBJECTIVES :

- To reduce the time for organisation.
- To increase efficiency and accuracy of the system.
- To make the retrieval of information faster.
- To reduce large amount of paper work.
- To make the system more reliable and to avoid any ambiguity.
- To make the system more flexible.
- It provides a convenient solution of billing pattern.
- It maintains new entered category or products.

CONCEPTS USED

- In order to accomplish this project following concepts were used :
 - Objects
 - Classes
 - Data abstraction and encapsulation
 - Inheritance
 - Polymorphism
 - Dynamic binding
 - Message passing
 - File Concepts such as ifstream, ofstream, fstream
- For coding purpose VS Code was used and code was written in C++ language.

METHODOLOGY

Building up a project on Supermarket Billing System was a great piece of experience, it not only help me in gathering information about new technologies but also made me realize the use of programming in real life.

Discussing about the journey of building up this project goes like this :

There are 4 modules in this project. These are as follows:

- 1)Apply taxes and commissions
- 2)Check the report
- 3)Enter the information about products
- 4)Calculate the bill

Module 1: Apply taxes and commissions

This module is for administrator who will

1. Set the taxes for the products.
2. Set the commissions for the products.

Module 2: Check the Report

This module is also for the administrator who can generate or check the report of the product and how many products are sold on particular date or in a period of time.

Module 3: Enter the information about products

This module is for data entry operator who will

1. Enter which products come in the store.

2. Prices and expiry date of the product.

Module-4: Calculate the bill

This module is for bill calculating operator who will

1. Calculate the bill.
2. Print it.

Advantages of the Proposed System

- Converts the manual work which is time consuming and error prone to fully automated system.
- Helps in eliminating the paper work, saves time and improves customer services.
- Makes the addition of items in the bill, deletion of items and modification of items in the bill easier and faster.
- C++ has supported to implement object oriented concepts.
- Bills can be calculated more easily and with more accuracy.
- Reduces pressure on the labour.
- Makes the system more feasible and flexible and thus retrieval of information becomes convenient.

CONCLUSION

This software has been developed designed to reduce the time taken to handle the sales activity. It is designed to replace an existing manual record system for reducing time taken for calculations and for storing data. This system has been developed with oops concepts. The system is strong to handle daily operations where the database is cleared over certain time. This system will reduce manual work, calculations and will also provide periodic reports any time.

References :

YouTube

Udemy

www.google.com