## SRM, Andhra Pradesh

Introduction to Programming Using C

CSE 105 L

Project Report on

“Customer Billing System”

**submitted in partial fulfillment for the award of the degree in**

## BACHELOR OF TECHNOLOGY

**IN**

## COMPUTER SCIENCE AND ENGINEERING

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# **ABSTRACT**

“Customer Billing System” is a simple Command-Line based billing and customer database program that can help businesses manage their customer data and assist with the billing process in a very cost and time-efficient manner. It uses C Language as the front end and Generic Data Files to store the data in the backend. This program lets the businesses store customer accounts along with their basic details and their wallet balance.

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**CHAPTER 1**

# **INTRODUCTION**

This program is intended to be used by Business Managers and the Billing Team. It works by providing the user with a menu-based interface. Users can create accounts for their customers by entering basic details which are then stored in Generic Data Files which are located in the same Directory as the Program Code. The Program also offers the user the functionality to fetch the Customer Details and update their wallet balance according to the Sale Bill or Wallet Top-Up.

The whole program has been written in C-Language which is a high-level and general-purpose procedural computer programming language that supports structured programming, lexical variable scope, and recursion with a static type system.

# **CHAPTER 2**

**OBJECTIVE**

This program aims to solve the problem of long billing queues at the checkout counter and ease out the customer details and bill management process for all types of businesses all while increasing time efficiency and reducing human error which can result in huge losses for high-value transaction businesses.

**CHAPTER 3**

# **SYSTEM REQUIREMENTS**

**3.1 SOFTWARE REQUIREMENTS:**

1. Language Used: C (C18)

**3.2 HARDWARE REQUIREMENTS:**

1. Operating System: Windows 7 or Later
2. Processor: Dual-Core and above
3. RAM: 1GB or More

# **CHAPTER 4**

**SYSTEM DESIGN**

**ALGORITHM**

MENU: This contains all the options that can be carried out by the program

OPTION: Option Number according to the menu

NAME: Name of the Customer entered by the user

BALANCE: Money Available in Customer’s Account

1. START
2. Print MENU
3. Input OPTION
4. IF OPTION==1:

Input Customer Details

Dump customer details in NAME.dat file

Print “Details of NAME Saved Successfully”

GOTO Step 2

1. IF OPTION==2:

Input Customer Name to be Searched

Search for the NAME.dat file

Output Customer Details

GOTO Step 2

1. IF OPTION==3:

Input Customer Name and Bill Details

Search and Update for the NAME.dat file

Print “Updated Customer Balance: Rs. BALANCE”

GOTO Step 2

1. IF OPTION==4:

Input Customer Name and Amount to be added

Search and Update the NAME.dat file

Print “Updated Customer Balance: Rs. BALANCE”

GOTO Step 2

1. IF OPTION==5:

Print “Program Terminated”

STOP

**BLOCK DIAGRAM**

Here is the representation of the program in the form of a block diagram:

Display MENU OPTIONS

IF MENU OPTION = 1

IF MENU OPTION = 3

IF MENU OPTION = 4

IF MENU OPTION = 2

Input Customer Name and Amount

Input Customer Name and Bill Details

Input Customer Details

Input Customer Name

Input Customer Name

Update Customer Data File

Update Customer Data File

Load Customer Details

Create Customer Data File

Output Confirmation

Output Confirmation

Output Confirmation

Output Confirmation

Output Confirmation

IF MENU OPTION =5

# **CHAPTER 5**

**SYSTEM IMPLEMENTATION**

The program is an amalgamation of 5 Modules that are accessed by the users using the Main Module:

**MAIN MODULE**

Main Module has an infinite loop that Executes the User Command as per the value returned by the Option Module. The loop can only be exited when the Value returned by the Option Module is “5”.

**OPTION MODULE**

Text

Description automatically generated

Option Module prints the available functions that can be executed by the program and then inputs a number from the user which is then returned to the function call.

**WRITEFILE MODULE**

**Text

Description automatically generated**

Write File Module dumps the Account Structure named “Customer” in a Generic Data File in the form of “CustomerName.dat” and then outputs a confirmation message.

**SEARCH MODULE**

**Text

Description automatically generated**

Search Module takes Customer Name as an input and then reads the “CustomerName.dat” file after which it outputs the Customer’s Details in a Structured Format.

**READFILE MODULE**

**Text

Description automatically generated**

Read File Module takes Customer Name as an input and then reads the “CustomerName.dat” file after which it loads the read data into the Account Structure named “Customer”.

# **CHAPTER 6**

**RESULTS**

**INSTANCE 1**

**Text

Description automatically generated**

**INSTANCE 2**

**Text

Description automatically generated**

**INSTANCE 3**

**Text

Description automatically generated**

**INSTANCE 4**

**Text

Description automatically generated**

**INSTANCE 5**

**Text

Description automatically generated**