## 

## BILL IT UP

*A*

***Major Project Report***

*Submitted*

*In partial fulfillment*

*For the award of the Degree of*

## BACHELOR OF TECHNOLOGY

***In Department of Computer science and Engineering***

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## CERTIFICATE

This is to certify that this project report **“Restaurant Billing System (Bill It Up)”** is the confide work of **“Gazal Lodha”** who have carried out the project work under my supervision. I approve this project for submission of the Bachelor of Technology in the **Department of Computer Science and Engineering, Techno India NJR Institute of Technology**, affiliated to Rajasthan Technical University, Kota.

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**Department of Computer Science**

## ABSTRACT

The “Bill It Up” is an application to automate the process of information

recording and billing of a restaurant. This desktop based application is

designed to administer its users and customers. It is a billing system, made

for the effective utilization of modern technology in the organization. It is

designed for the sole purpose of efficiency, speed and accuracy.

Waterfall Model is used to develop this software where different

requirements are identified at first, analyze the requirements then design the

software using various tools and techniques and using the development

language the software is developed. Testing is done during the

development process.

* 1. **Scope**

Scope of this project is very broad in terms of other manual billing system.

Few of them are:-

* + - This can be used in restaurants as well as in Hotels.
    - Can be used anywhere any time as it is a web based application.
    - No restriction that manager has to be present when the waiter takes makes the entry.

**ACKNOWLEDGEMENT**

It gives me immense pleasure to express my deepest sense of gratitude and sincere thanks to my highly respected and esteemed guide **Mr. Aditya Maheshwari (Project In-charge), TINJRIT** for their valuable guidance, encouragement, and help in completing this work. Their useful suggestions for this whole work and cooperative behavior are sincerely acknowledged. At the end, I would like to express my sincere thanks to all my friends and others who helped me directly or indirectly during this project work.

I also wish to express my indebtedness to my parents as well as my family members whose blessings and support always helped me to face the challenges ahead.

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***CHAPTER – I***

## *INTRODUCTION*

### INTRODUCTION

* 1. **Purpose**

## “Bill It Up” is a Restaurant Billing System Using Python can be

## very useful within a business environment. Instead of doing

## manual work for making up a bill at Restaurant,which gets

## tiring and time consuming, you can generate a bill including

## tax and service charges in just few clicks. When making up a bill

## manually at a Restaurant may contain some human errors like

## adding wrong items into the bill or summing up their total also

## may end up wrong, it also sometimes results into a Bad

## Impression towards the Restaurant from a Customer. Ideally,

## user should be able to generate bill 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

## it “Bill It Up” which is a Restaurant Billing System Using

## Python. It is very useful to small business or restaurant or cafe or

## food truck owners. This helps the owner to fasten the process

## which is bug free and easy to use. This project firstly has the

## menu and then adds up the selected items by customer and

## sums up the total of all items adds tax and service charges and

## displays total.

* 1. **SCOPE**

## Scope of this project is very broad in terms of other manual billing system.

Few of them are:-

* This can be used in restaurants as well as in Hotels.
* Can be used anywhere any time as it is a web based application.
* No restriction that manager has to be present when the waiter takes makes the entry.

### DOCUMENT OVERVIEW

The remainder of this document is 8 chapters, the first providing introduction of the project. It lists all the functions performed by the system. The second chapter consists of software requirements specification. The third chapter provides details about system analysis and design. The fourth chapter gives data dictionary information. The fifth chapter consists of snapshots of the complete project. The sixth chapter gives testing for the project. The seventh chapter tells about the conclusion and future enhancements of the project. The final chapter concerns with the bibliography.

***CHAPTER – II***

***SOFTWARE REQUIREMENT SPECIFICATION***

**2.1.** **INTRODUCTION**

**2.1.1. PURPOSE**

This Software Requirements Specification provides a complete description of all the software’s and hardware’s used for developing the project and implementing the project.

The main objective of this application is to efficiently evaluate the user thoroughly through a fully automated system that not only saves a lot of time but also gives fast results.

## Software Requirements:

## Python 3.10

## Visual Studio Code.

## Windows 10

## Hardware Requirements:

## 4 GB RAM or above

## Intel i5 Processor

## 64-Bit Operating System

***CHAPTER – III***

***SYSTEM ANALYSIS AND DESIGN***

## SYSTEM ANALYSIS

## “Bill It Up” is a computer based billing system with user friendly

## interface which automatically manages the billing process of the

## customer very easily taking only a short period of time. The

## system takes customer data and generates bill for the customer.

## It is an automated desktop based software which has a simple

## design and very easy to use also. This project’s main focus is on

## proper management of information regarding the billing records.

## All the data is fetched into the computer immediately and

## various bills can be generated through computers. Moreover

## works become very easy because there is no need to keep data

## on papers.

## LIMITATIONS

## Need further more improvements for high class restaurants.

## It does not store customer data.

## No auto-discount generator available.

***CHAPTER – IV***

## *DATA DICTIONARY AND*

## *DATA DIAGRAMS*

**4.1DATA DICTIONARY**

A data dictionary is a catalog-a-repository of the elements in a system. As the name suggests, their elements center on data and the way they are structured to meet user requirements and organization needs. In a data dictionary, you will find a list of all the elements composing the data flowing through a system. The major elements are data flows, data stores, and processes. The data dictionary stores details and descriptions of these elements.

## 4.2 FLOWCHART

## A Flowchart is a type of diagram that represents a workflow or process. It can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solve a task.

## 

## 4.3 USER CASE DIAGRAM

## Use case diagram A use case diagram is a graphical representation of the interaction among the elements of a system. A use case is a methodology used in a system analysis to identify, clarify and organize system requirements.

## https://lh5.googleusercontent.com/RxQi6rCcrueq-HhI9RKPaAhw3047Ox11yFdy7-gop9GZfTCBX1RlQ-IGlH7xCgQG1_ot8VFh_U0jhcq9HsksmdlZipeOUPt6MvofQKrXUQ6djPMnK9J6OVI4647UxKgBcUoibNheTQBS1iao9A7P1A

***CHAPTER – V***

***SCREENSHOTS***

## 5.1 CODE SNIPPETS

## 

## 

## 

## 5.2 WORKING OF BILL IT UP

## 

## 5.3 GRAPH

## 

## 5.4 BILL

## 

***CHAPTER – VI***

***TESTING***

## 

## PROJECT TESTING

## In order to find any errors or the problems in the application,

## testing is carried out. Software Testing is the validation and

## certification process where the software fulfils the requirements

## of the users and project specifications. Since this is a desktop

## application testing is done in only one environment i.e. on the

## Windows 10 environment. Table below consists of various tests

## performed during the development of this project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NO. | Test Performed | Description | Result | Check |
| 1 | Application file | Application file was launched | Login page open | OK |
| 2 | Login Page | Text fields and buttons | This page contains text field for customer details and customer orders | OK |
| 3 | Generate Bill Button | Generate Bill | This button generate the bill for the customer | OK |
| 4 | Graph | Weekly Revenue | This button represents the weekly revenue in graphical form | OK |
| 5 | New Entry | Clear | This button clears the page for new customer entry | OK |

***CHAPTER – VII***

## *CONCLUSION AND FUTURE ENHANCEMENTS*

## CONCLUSION

## The main goal of developing this desktop application was to

## make the day to day operation at the restaurants easy and

## smooth. This application helps to know how busy the restaurant

## is going to be in a certain day or in a certain time of the day.

## Since the employee know when and how busy they are going to

## be in advance they can make a pre- plan to make their operation

## smooth and give their customers high level satisfaction. Since

## we have tested the application in the Windows environment and

## it runs smoothly we can state that the main objective of this

## application had been achieved

## FUTURE SCOPE

## We can make this application versatile by adding features

## like advance accounting , data regarding purchases made

## and staff salary and staff attendance.

## We can also store customer data which can help in

## predicting the frequently visiting customers and their

## choices helping the working staff to serve them better and

## automatically processing the discounts to them.

***CHAPTER – VIII***

***BIBLIOGRAPHY***

### BIBLOGRAPHY

### List of useful Websites

* <https://www.google.com/>
* <https://docs.python.org/3/library/tkinter.html>
* <https://www.youtube.com/>
* <https://www.w3schools.com/python/matplotlib_plotting.asp>