



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**



**A MINI PROJECT**

**REPORT**

*for*  
*MINI PROJECT (20CSE59)*

**THE HUNGRY HOUSE**

*submitted by*

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**1NH18CS156**  
**5/B**

*In partial fulfillment for the award of*  
*the degree of*

**BACHELOR OF ENGINEERING**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**



**NEW HORIZON**  
**COLLEGE OF ENGINEERING**



## *Certificate*

*This is to certify that the mini project work titled*

### **THE HUNGRY HOUSE**

*Submitted in partial fulfillment of the degree of Bachelor of Engineering  
in Computer Science and Engineering*

*Submitted by*

**RAMYASHREE S**

**1NH18CS156**

*DURING*

*ODD SEMESTER 2020-2021*

*For*

**20CSE59**

Signature of Reviewer

Signature of HOD

### **SEMESTER END EXAMINATION**

*Name of the Examiner*

*Signature with date*

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## THE HUNGRY HOUSE

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- 6** Sam R. Alapati. "Chapter 2 Relational Database Modeling and Database Design", Springer Science and Business Media LLC, 2003  
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## **ABSTRACT**

The Hungry House is developed using graphical user interface gui python to achieve the easy way to maintain the restaurant management system. It is developed to eradicate the manual system. The traditional system of restaurant menu is paper based. Papers are used in restaurants for displaying the traditional menu cards, writing down the orders of customers, storing the records of customers. This process requires lot of labors and also lot of efforts and hard work. To overcome this problem, the Hungry House is developed which is digitalized system where orders and Billings are done in the system.

This project helps to benefit the restaurant managers and also restaurant customer by reducing the time consumption, manual calculation errors and also reduces the efforts. This project is enhanced to develop to display the menu in system and to generate the receipt or bill in the system.

## **ACKNOWLEDGEMENT**

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# CHAPTER 1

## INTRODUCTION

Restaurant is generally an establishment where the general public may obtain meals or refreshments. The term Restaurant has its origins in Paris. Restaurants have become the places of social contact, of discovering new cultures and tastes from far-away lands, of spending a time with your loved ones and with friends, making a business deals over a glass of wine, and so forth. In addition to this, it is also acts as the basic functions of “restoring” people with the help of good food, service and ambience.

The Restaurant Management System helps the restaurant manager to maintain or to take care of the restaurant more effectively and efficiently by computerizing meal ordering, billing and inventory control.

### 1.1 COURSE OBJECTIVES

The main objective of this mini project is to develop an application that will have the following functions: -

- Basically, mini project helps us to explore and strengthen the understanding of fundamentals through practical application of theoretical concepts.
- It also helps us to boost your skills and widen your horizon of thinking.
- It helps the beginners to do larger projects in their career.
- It is helpful to design our algorithm.
- Better learning of the coding language.
- To implement the concepts and learn to implement them properly.

### 1.2 PROBLEM DEFINITION

The traditional system of restaurant menu is paper based where papers are used in restaurants for displaying the traditional menu cards, writing down the orders of consumers and storing the records of billing system. This process requires lot of labors and also lot of efforts and hard work. It is possible to make mistake while calculating the bill due to distraction and lack of mind etc. which leads to misunderstanding between employees and customers. To overcome this problem, "The Hungry House" restaurant is developed using python graphical user interface and Structured Query Language.

The main goal of "The Hungry House" is to develop digitalized system where orders and billing are done in system without using paper and pen. Due to digitalized system, the risk of manual errors is eliminated easily. This project has few options such as the customer can view the information about the order or menu along with price, billing along with receipt, and it also contains calculator where we can perform simple calculations.

### **1.3 OBJECTIVES**

This project intends to introduce more user friendliness.

- It increases the efficiencies and reduces the mismanagement
- It manages the menu items with price and ordering food.
- It helps to effectively manage ordering and billing of items.
- It is designed to avoid the paper works.
- It helps to decrease the number of labors and also cost of labor will be reduced.
- It is also designed to increase operational efficiency and Saving money and time
- It maximize the profit and provide more security.
- It provides a bill or receipt within a instant of time.
- It avoids calculation errors and misunderstanding between customers and employees.

### **1.4 EXPECTED OUTCOMES**

- Price - Customer can view the price list
- Order - Customer can order the food
- Reset - If customer wants to change the order then we can reset the bill.
- Bill - Customer will receive the bill receipt
- Calculator - To perform simple calculations

## **CHAPTER 2**

### **REQUIREMENT SPECIFICATIONS:**

#### **2.1 HARDWARE REQUIREMENTS**

- Processor : intel core i5
- RAM : at least 1Gb
- Disk : 10 GB

#### **2.2 SOFTWARE REQUIREMENTS**

- Operating system : Windows XP
- Front End : ASP.Net 2.0
- Data Base : SQL Server Management Studio 2005
- Database Software : MYSQL

## CHAPTER 3

### PYTHON FUNDAMENTALS

#### 3.1 BASIC PYTHON FUNDAMENTALS

##### EASY TO LEARN AND USE

- **Easy to Code:**

Python is easy and quick to learn and use. It is programmer-friendly and high level programming language. Python is very efficient to code. Compared to other programming languages like C++ and Java, it is easier to code in Python. One can learn python syntax in just a few hours. Thus, it is developer-friendly.

- **Easy to Read:**

Being a high-level language, Python code is just like English. Looking at it, one can tell what the code is intended to do. Further, since it is dynamically-typed, it enforces indentation. This aids better readability.

##### EXPRESSIVE LANGUAGE

Python language is more expressive which means that it is more comprehensible and readable. Suppose there are two languages A and B, and all programs that can be developed in A can be made in B using local transformations. Whereas, there are some programs that can be developed in B, but not in A, using local transformations. Then, B is considered more expressive than A. Python provides a myriad of constructs that help developers focus on the solution rather than too much on the syntax.

The Python fundamentals consists of basic building blocks of Python programming language. And it is basically divided into the following

- Statements
- Indentations
- Comments
- Variables
- Constants
- Tokens

## 1. STATEMENTS

They are logical instructions that interpreter can execute and read, it can also be both single and multiline.

The two categories of the Python Statements are:

- Expression Statements
- Assignment Statements

**EXPRESSION STATEMENTS:** By the help of expression statements, we can perform the operations like addition, subtraction, concentration and many more. In short, the statement has return value.

It is an expression that appears on the right side of the assignment, as a parameter to method call.

**ASSIGNMENT STATEMENTS:** By the help of assignment statements we can create new variables, assign values and also change values.

Assignment statements are categorized into three:

- Value-Based Expressions on Right hand side
- Current Variables on Right hand side
- Operation on Right hand side

## 2. INDENTATION

The programming languages python uses indentation to mark a block of the code. Most of the Programming languages provide indentation for better code formatting and doesn't enforce to have it. But mainly in Python it is mandatory.

That's why indentation is crucial in Python.

## 3. COMMENTS

Comments are basically nothing but tagged lines of in codes which increases the readability of the code and make the code self-explanatory. There are two categories of Comments.

- **Single line Comments:** # by the help of these we begin a single-line comment.
- **Multi-line comments:** by the help of these we write multiline comments in python.

- **Docstring comments:** The documentation string in Python gives programmers an easy way of adding quick notes with every Python module, functions, class and method.

Multiline comments are using triple quotation in strings.

## 4. VARIABLES

In Python variable is a memory address that can change, when a memory address cannot change then it is known as constant. Variable is the name of the memory location where the data is stored. Once the variable is stored then space is allocated in memory. It also defines the variable using a combination of numbers, letters, and the underscore character.

## 5. CONSTANTS

In Python constants is a type of variable that holds values, whose value cannot be changed. We rarely use constants in Python.

## 6. TOKENS

In Python program, tokens are the smallest unit of the program. Python contains the following tokens:

- Reserved words or keywords
- Identifiers
- Literals
- Operators

**RESERVED WORDS:** Reserved words are nothing but a set of special words, which are reserved by python and also have a specific meaning. Here, in Python we are not allowed to use keywords as variables. Reserved words are case sensitive in Python.

For example: False, if, None, import, True, in, and, def, return, elif, try, else, while, except, with, finally, yield, is, as, break, class, etc

**IDENTIFIERS:** In Python programming identifiers are nothing but user-defined names to the represent all programmable entity like variables, functions, modules, classes . There are few rules that we need to following while defining an identifier.

They are:

- i. We can use a sequence of letters lowercase or uppercase. We can also mix up digits or an underscore while defining an identifier.
- ii. We cannot use digit to begin an identifier name.
- iii. We should not use reserved keywords to define an identifier.
- iv. You are not allowed to use any other special characters other than underscore.
- v. Even though python doc says that you can name an identifier with unlimited length.

**LITERALS:** Other built-in objects in python are literals. The Literals can be defined as data that is given in a variable or constant.

The following literals are in:

- **String Literals:** String literals is a sequence of characters surrounded by quotes. Single, double or triple quotes can be used for a string.
- **Boolean literals:** Boolean literal can have any of two values i.e True or false.
- **Numeric literals:** They are immutable. Numeric literals can belong to three different numerical types Integer, Float, Complex.
- **Collection literals:** The four types of collection literals are List literals, Tuple literals, Dict literals, and Set literals.
- **Special literals:** Python basically contains one special character that is none.

## **OPERATORS:**

In python operators are the symbols which perform the operation on some values.

The following are the known operators in the Python:

- Arithmetic Operators
- Relational Operators
- Assignment Operators
- Logical Operators
- Membership Operators
- Identity Operators
- Bitwise Operators

## 3.2 STANDARD DATA TYPES

### 3.2A PYTHON NUMBERS

Numerical values are stored in number data types. When the value is assigned to the variable, number objects gets created. For example –

Let var1 = 1

And var2 = 10

By using the Del statement, we can delete the reference to a number object.

The syntax for the Del statement is :-

Del var1 [,var2[,var3[,varN]]]

We can also delete a single object or multiple objects by using the Del statement. For example – Del var Del var\_a, var\_b

### Python supports different numerical types –

#### Int (signed integers)

- **Long integers** – long integers be represented in octal and hexadecimal
- **Float** - it is used to represent floating point real values.
- **Complex** – it is used to represent the complex numbers

### Python Strings

In python, strings are represented as a continuous set of characters which is enclosed by quotation marks. Quotation can be single quotes or double quotes. Using slice operator, we can derive the subset of strings. Square bracket [] represents the slice operator. [:] represents that subset of string whose starting index is 0 and ending index is length of the string.

The string concatenation operator is represented by plus sign (+) which is used to concatenate two strings and repetition operator is represented by asterisk sign(\*)

For example :-

str1="HELLO"

str2= " WORLD!"

str3= str1+str2

//From the above code:

Str3 = HELLO WORLD!



### 3.2B Python Lists

List is one of the most versatile of Python's compound data types. A list contains items which is separated by commas (,) and it is enclosed within the square brackets ([]). Lists are similar to arrays in C to some extent. The major difference between list and array is that all the items in the list can be of different data type where as in array the items are all of same data type.

The items in the list can be accessed using the slice operator which is represented by Square bracket ([] and [:]) whose starting index is 0 and ending index is length of the list. The list concatenation operator is represented by plus sign (+) which is used to concatenate two lists and repetition operator is represented by asterisk sign(\*)

For example –

```
#!/usr/bin/python
```

```
list = [ 'hello', 709 , 1.56, 'dhoni', 70.9 ]
```

```
tinylis = [1893, 'name']
```

```
finalist = list+tinylis
```

```
//From the above code:
```

```
Finalist=['hello', 709 , 1.56, 'dhoni', 70.9 ,1893, 'name']
```

### 3.2C Python Tuples

A tuple is another form of Python's datatype. Tuple is similar to the list. A tuple contains a number of values or items which are separated by commas (,). Just like lists, tuples are enclosed by parentheses ({}).

The major difference between lists and tuples are :

- Lists are mutable whereas tuples are immutable
- Lists are enclosed in square brackets ([]) whereas tuples are enclosed in parentheses ({})
- Elements and size of lists can be changed whereas elements and size of tuples cannot be updated.

For example –

```
#!/usr/bin/python

tuple = ( 'hello', 796 , 22.23, 'dhoni', 70.5 )
tinytuple = (153, 'johns')
print(tuple)      # Prints the complete tuple
```

### 3.2D Python Dictionary

In python, Dictionary is one of the data type which is a kind of hash table type. Dictionaries works like an associative arrays which consists of key-value pairs. A dictionary keys can be any data type, but keys are usually numbers or strings. A dictionary values can be any Python objects

Dictionaries are enclosed within the curly braces({}) and values can be accessed using square braces ([]).

For example–

```
#!/usr/bin/python
dict = {}
dict ['one'] = "This is one"
dict[2] = "This is two"
```

### 3.3 DATABASE FUNDAMENTALS

DBMS is the short form of Database Management System. DBMS refers to the technology which is used to store the user's data and to retrieve the user's data with utmost efficiency along with appropriate security measures. This chapter explains the basics of DBMS which includes DBMS Architecture, data models, data schemas, data independence, Entity Relational model (E-R MODEL), relation model, relational database design, and storage and file structure.

This introduces the concepts of database, relational database, tables and data types, manipulation and data selection, views, stored procedures, backup and restores normalization, constraints, indexes, security, and functions.

## **TABLES**

It is most basic building of a database. It's the place where we will put our idea, and define their data type, and also their relationship with the other tables. It consists of rows and columns.

Columns consist of three types: - Simple, Composite, Multi-valued

## **PRIMARY KEY**

If we have a long list of rows, it's very important to have something that uniquely identifies each row that is called primary key.

And we are going to use primary key to connect between the tables, and to form a relationship.

The kinds of relationships are:

- One-to-Many Relationship
- Many-to-Many Relationship

## **SQL**

The structured query language is the defect language used for the management and manipulation of data in relational database. The Sql can be used by query, insert, update, and modify data.

## **SELECT**

The select statement is used to retrieve the data from the specified database tables. If the table is empty then it displays as empty set. If table contains the records then it retrieves zero or many rows from one or many database tables.

1. SQL join combines the records from two or more tables in a relational database.
2. CROSS join will produce the row which is the combination of each row from the first table with each row from the second table.
3. AN INTERSECTION is the command used to combine the results of two queries and it returns only rows that appear in both result sets queries.

4. A UNION enables to combine the results of two SQL queries into a single table of all matching row.

## MANIPULATE DATA

1. **Insert data:** - The statement INSERT adds one or more records for any single table in a relational database.

2. **Update data:** - The statement UPDATE changes the data of one or more records in a table.

3. **Delete data:** - DELETE statements remove one or more records from the table.

## VIEWS

- **Create views:** Create views is the statement which is used to create a new view. If the view already exists then we can replace the view by providing the statement replace view. If view does not exists then replace view acts as create view. Create view provides the set of results of a existing query on the data.
- **Stored Procedures:** Stored procedure is a subroutine which is available to applications that can access a relational database management system (RDBMS).

## FUNCTIONS

A user defined functions are provided by user and aggregate function is a function where the multiple values of rows are grouped together as an input on an certain criteria to form single value of more significant meaning.

## NORMALIZATION

Normalization is the process of organizing the columns and tables of a relational database to minimize data redundancy.

The types are First normal form (1NF), Second normal form (2NF), Third normal form (3NF), Fourth normal form (4NF).

## CONSTRAINTS

We have to choose appropriate primary keys, select appropriate data type, select appropriate fields for composite keys, understand the relationship between foreign and primary key.

## **INDEXES**

They are basically used to quickly to locate data without having to search each and every row in database table every time a database table is accessed.

## **SECURITY**

Database security is the use of a board range of information security controls to store functions, protect databases, data servers, database systems, against compromises of their confidentiality, integrity, and availability.

## **BACKUP AND RESTORE**

The process of backup and restore is referred to copying the computer data and archiving the computer data thus we can use it to restore the original data after a data loss event.

## **3.4 DATABASE BASICS**

### **DATABASE**

Database is a platform independent and it can be implemented easily and can be used in Windows, Linux server etc. It is also compatible with several hardware mainframes. The Performance of database is fast and stable and it also provides business values at a low cost.

The database plays a very important role in humans life. Without database, many works Would have become very tedious, difficult and impossible tasks. The organization such as banks, Universities and libraries depends on database system. Without database, maintenance of these Organizations would be impossible task. To perform database operations, it has to be implemented and interfaced on a computer. These term is known as database server.

### **Reasons to Use MySQL is :**

- It is Scalability and Flexibility
- Performance of MySQL is High Availability

- Robust Transactional Support
- Web and Data Warehouse Strengthens the Strong Data Protection Management Ease

## **DATA ITEMS**

Data item is the tiniest unit of data and it is also called as field in data processing. Data item provides a meaning to the users.

Ex: "1NHXXCSYY", "NAME"

## **ENTITY**

An entity is an "object or thing" in the real world which distinguishes from all other objects. An entity set is a set of entities of the same type which shares the same attributes. Entity is represented as rectangle.

Ex: student

## **ATTRIBUTE**

Attributes is the properties of an entity set. It is represented by eclipse.

Ex: student name

## **KEY ATTRIBUTE**

A key attribute is one of the attribute which has uniqueness and also distinguishing characteristic of the entity.

Ex: student roll number

## **MULTIVALUED ATTRIBUTE**

Multivalued attribute is one of the attribute having a multiple values for a specific entity is called multivalued attribute. It is represented by double eclipse.

Ex: student phone number

## **DERIVED ATTRIBUTE**

Derived attribute is the attribute whose value is derived from the other related attributes.

Ex: student name contains first name, last name.

## LOGICAL DATA

Logical data refers to the data stored in primary memory when the table is created by the users.

## PHYSICAL DATA

Physical data are the data which is stored in the secondary memory.

## SCHEMA AND SUB-SCHEMA

A schema is a description of logical database and it is drawn as a chart of types of data's which are used. Schema provides the entities name and it's attributes and also it specifies the relationship between entity and attributes.

A database schema includes a information such as :

- Characteristics of data items – entities, attributes
- Logical structures and relationships among the data items.
- It provides a format for the storage representation
- Also contains integrity parameters – physical authorization and backup policies

A subschema is known as derived schema which is derived from existing schema according to the users requirement. A single table can have more than one subschema.

## DESCRIPTION OF DATABASE USED SQL

- Combination of data
- Extraction of data
- Manipulation of data
- Organization of data

## 3.5 TKINTER

Tkinter is a Python binding to the Tk Graphical User Interface (GUI) toolkit. It is also a standard Python interface to the Tk GUI toolkit. Tkinter is can installed in standard Linux, Microsoft Windows and Mac OS X of Python. The Tkinter name comes from Tk interface. Tkinter was written by Fredrik Lundh.

## WIDGET EDIT

Widget edit is the generic term of building blocks which is used to make an application in a graphical user interface(GUI)

- **Core widgets:** The core widgets has a container which includes framework, label frame works , top level and paned window. It also has buttons which includes button, radio button, check button (which is known as checkbox), and menu button. The core widgets also contains a text widgets along with label, message and text.
- **Entry widgets:** Entry widgets contains scale, scrollbar, list box, slider, spin box, entry (allows only a single line text), option menu, text (allows multiple line of texts), and canvas.

Tkinter provides three modules which allows pop-up dialog to be displayed:

- tk.messagebox (); In which confirmation, information, warning and error dialogs can be passed as arguments according to our project needs.
- tk.filedialog (); in which single file, multiple file and directory selection dialogs can be passed as arguments according to our project needs.
- tk.colorchooser (); color, picker passed as arguments according to our project needs

## LABEL WIDGET

A label widget Shows any text to the user. A text can be added programmatically or by default to label to display a text on the screen for the user. A label can be placed on the window or a frame or a canvas.

## BUTTON WIDGET

A Button can be on and off. When a user clicks on the button it emits an event. Images can be displayed on buttons too. A button has a command and a function associated with it to perform an action when it is passed.

## ENTRY WIDGET

An Entry widget is used to accept a text input from the user. The obtained input text can be stored in a variable and used for several operations . The entry box can be placed on



the window or frame and can accept values of several types such as `StringVar()`, `IntVar()` and `DoubleVar()`.

## **SCALE WIDGET: HORIZONTAL**

Scale widget is used to have a slider that goes from one value to another. The starting, ending and step values can be set. The current value of the slider can be accessed by its `Get` method and the current value can be set by its `set` method.

## **LISTBOX WIDGET**

Listbox displays a list of items and lets the user choose from one set of options. The list can be of various types and the current value of the list box which is selected can be bound to an event and is represented by `<<ListSelect>>`.

## **FRAME EDIT**

The Frame widget is the one of the basic unit of organization for complex layouts in Tkinter. A frame is a rectangular area which contains other widgets in it.

## CHAPTER 4

### DESIGN

#### 4.1 ALGORITHM

#### SCHEMA DIAGRAM

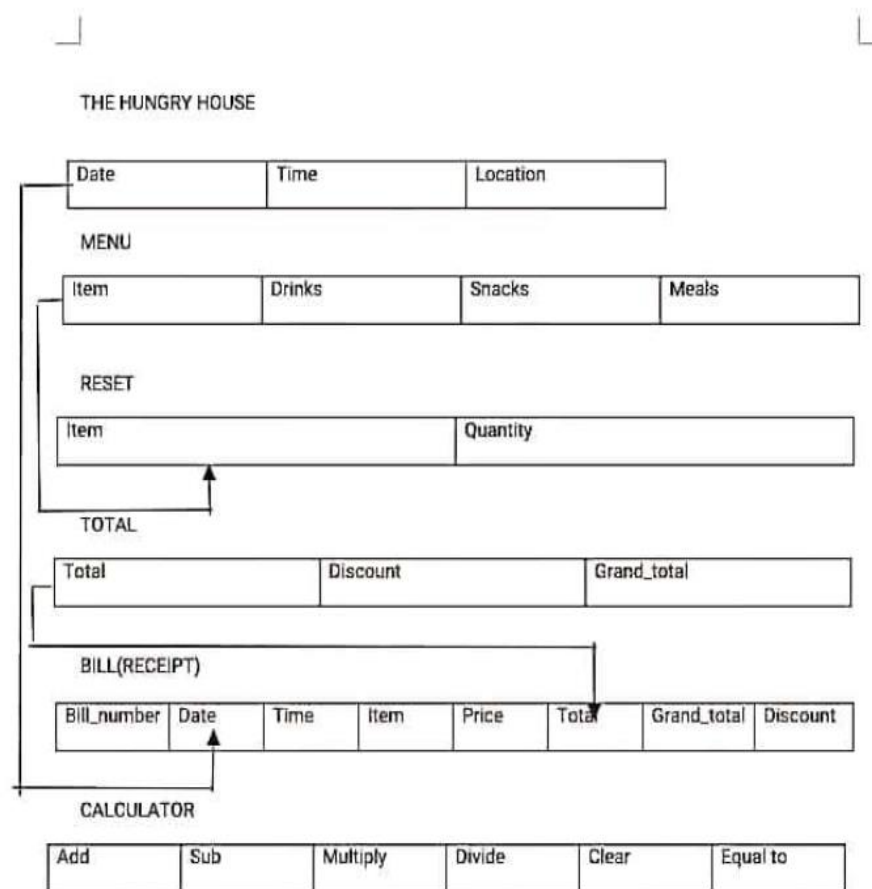


FIG 4.1 SCHEMA DIAGRAM

## ER DIAGRAM

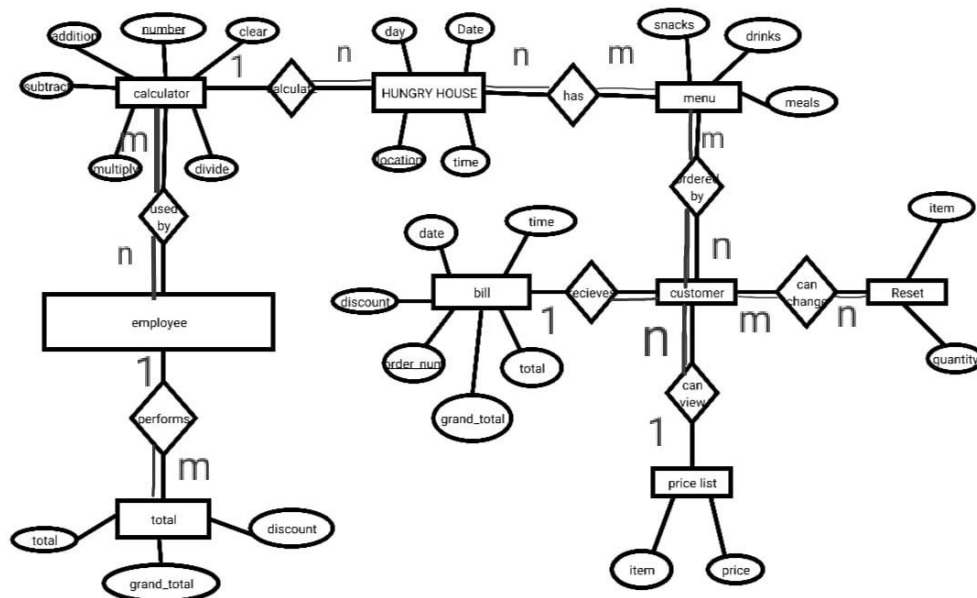


FIG 4.2 ER DIAGRAM

## CHAPTER 5

### IMPLEMENTATION

#### 5.1 IMPLEMENTATION OF FUNCTION

- A function is said to be a block of code which runs only when it is called.
- If a function is not called, then it do not execute the code present in the function block.
- We can pass data into the function, the passed data are known as parameters.
- A function can be a parameter function or non parameter function.
- To define a function, “def” is the keyword to be used.
- A function can return the value

#### SYNTAX FOR CREATING A FUNCTION

```
Def my_function:    //creating a function  
    print ("Hello developer's, I am the block of function code")    //block of code  
my_function()        //calling function.
```

#### 5.2 IMPLEMENTATION OF TKINTER

- Tkinter module is the standard Graphical User Interface (GUI) library for Python. It provides the fast and easy way to create GUI applications.
- It is a powerful object-oriented interface to the Tk GUI toolkit.
- To implement the Tkinter module in the code, we have to import it by using the statement as “import Tkinter;”

#### SYNTAX FOR CREATING A TKINTER

```
import Tkinter;  
top = Tkinter.Tk()  
# Code to insert widgets..  
top.mainloop()
```

#### 5.3 IMPLEMENTATION OF FRAMEWORK WIDGET

- Label - Label is used to display the text on the screen

- Button - It contains the text and can perform an action when it is clicked
- Entry - It Allows only a single line of text
- Text – It allows multiple lines of text entry
- Frame – It is a rectangular region used to group related widgets or to provide padding between widgets

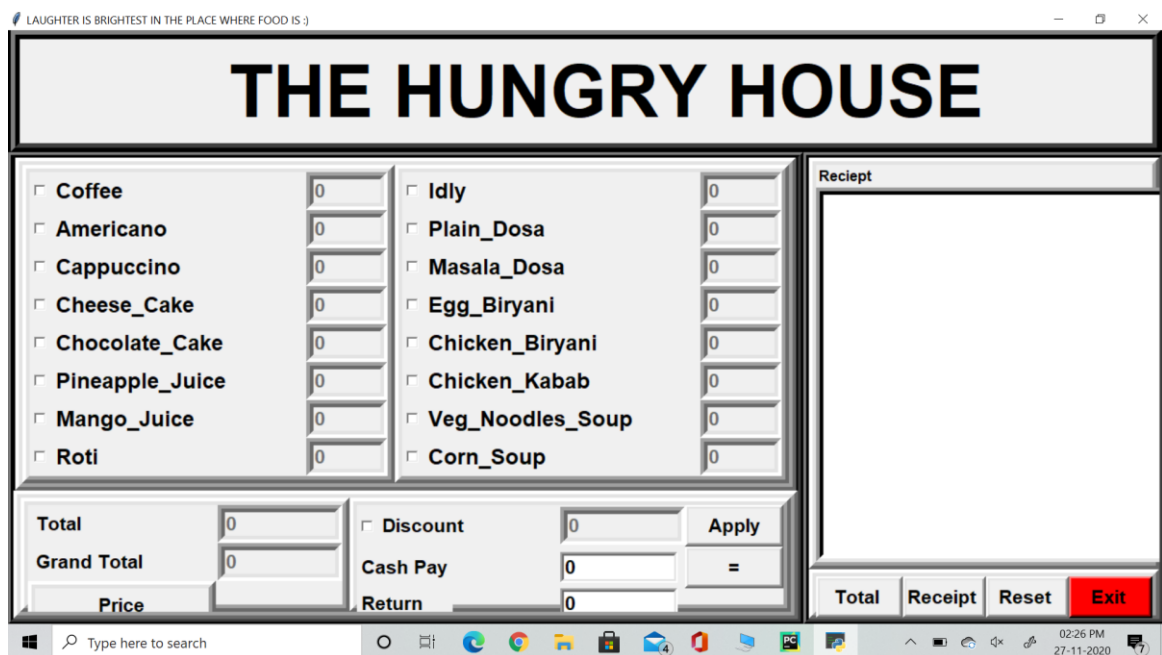
## **5.4 IMPLEMENTATION OF MYSQL**

MySQL is an open source RELATIONAL DATABASE MANAGEMENT SYSTEM (RDBMS) which can be easily implemented and managed either on-premise or via the cloud through a hosting provider. It supports many simultaneous writes and scales via replication.

## CHAPTER 6

### RESULTS

#### 6.1 INITIAL LOOK OF THE OUTPUT



Screenshot 1 : initial outlook

When the user executes the program the output screen will be displayed.

## 6.2 ORDER BEFORE GENERATING THE RECEIPT

LAUGHTER IS BRIGHTEST IN THE PLACE WHERE FOOD IS :)

# THE HUNGRY HOUSE

<input checked="" type="checkbox"/> Coffee	4	<input type="checkbox"/> Idly	0
<input checked="" type="checkbox"/> Americano	6	<input type="checkbox"/> Plain_Dosa	0
<input type="checkbox"/> Cappuccino	0	<input type="checkbox"/> Masala_Dosa	0
<input type="checkbox"/> Cheese_Cake	0	<input checked="" type="checkbox"/> Egg_Biryani	8
<input type="checkbox"/> Chocolate_Cake	0	<input checked="" type="checkbox"/> Chicken_Biryani	6
<input type="checkbox"/> Pineapple_Juice	0	<input type="checkbox"/> Chicken_Kabab	0
<input type="checkbox"/> Mango_Juice	0	<input type="checkbox"/> Veg_Noodles_Soup	0
<input type="checkbox"/> Roti	0	<input type="checkbox"/> Corn_Soup	0

Total	1940.0	<input type="checkbox"/> Discount	0	Apply
Grand Total	1940.0	Cash Pay	0	=
Price		Return	0	

Receipt

TotalReceiptResetExit

Screenshot 2 : entering order

Before generating the bill, orders is placed (i.e, food name and and number of quantity is entered) and the discount is 0%.

## 6.3 ORDER WITH RECEIPT AND DISCOUNT IS ZERO

LAUGHTER IS BRIGHTEST IN THE PLACE WHERE FOOD IS :)

# THE HUNGRY HOUSE

<input checked="" type="checkbox"/> Coffee 7 <input type="checkbox"/> Americano 0 <input checked="" type="checkbox"/> Cappuccino 4 <input checked="" type="checkbox"/> Cheese_Cake 2 <input type="checkbox"/> Chocolate_Cake 0 <input type="checkbox"/> Pineapple_Juice 0 <input checked="" type="checkbox"/> Mango_Juice 1 <input type="checkbox"/> Roti 0	<input checked="" type="checkbox"/> Idly 4 <input type="checkbox"/> Plain_Dosa 0 <input checked="" type="checkbox"/> Masala_Dosa 7 <input checked="" type="checkbox"/> Egg_Biryani 6 <input checked="" type="checkbox"/> Chicken_Biryani 1 <input type="checkbox"/> Chicken_Kabab 0 <input checked="" type="checkbox"/> Veg_Noodles_Soup 2 <input type="checkbox"/> Corn_Soup 0	<b>Receipt</b> Receipt Ref: BILL400951 27/11/20 23:47:16 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Item</th> <th>Qty</th> <th>Cost of itmes</th> </tr> </thead> <tbody> <tr><td>Coffee:</td><td>7</td><td>245</td></tr> <tr><td>Cappuccino:</td><td>4</td><td>460</td></tr> <tr><td>Cheese_Cake:</td><td>2</td><td>150</td></tr> <tr><td>Mango_Juice:</td><td>1</td><td>50</td></tr> <tr><td>Idly:</td><td>4</td><td>140</td></tr> <tr><td>Masala_Dosa:</td><td>7</td><td>350</td></tr> <tr><td>Egg_Biryani:</td><td>6</td><td>450</td></tr> <tr><td>Chicken_Biryani:</td><td>1</td><td>85</td></tr> <tr><td>Veg_Noodles:</td><td>2</td><td>130</td></tr> <tr><td colspan="2"><b>Sub_Total:</b></td><td>2060.0</td></tr> <tr><td colspan="2"><b>Discount:</b></td><td>-0.0</td></tr> <tr><td colspan="2"><b>Grand_Total:</b></td><td>2060.0</td></tr> </tbody> </table>	Item	Qty	Cost of itmes	Coffee:	7	245	Cappuccino:	4	460	Cheese_Cake:	2	150	Mango_Juice:	1	50	Idly:	4	140	Masala_Dosa:	7	350	Egg_Biryani:	6	450	Chicken_Biryani:	1	85	Veg_Noodles:	2	130	<b>Sub_Total:</b>		2060.0	<b>Discount:</b>		-0.0	<b>Grand_Total:</b>		2060.0
Item	Qty	Cost of itmes																																							
Coffee:	7	245																																							
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Masala_Dosa:	7	350																																							
Egg_Biryani:	6	450																																							
Chicken_Biryani:	1	85																																							
Veg_Noodles:	2	130																																							
<b>Sub_Total:</b>		2060.0																																							
<b>Discount:</b>		-0.0																																							
<b>Grand_Total:</b>		2060.0																																							

Total	2060.0	Discount	0	Apply
Grand Total	2060.0	Cash Pay	0	=
Price		Return	0	

Total
Receipt
Reset
Exit

Screenshot 3 : receipt without discount

When a customer orders a food and discount is 0%. To know the total amount of the order we have to click on total button and to generate the receipt we have to click on receipt button.



## 6.4 ORDER WITH RECEIPT AND DISCOUNT IS 5%

LAUGHTER IS BRIGHTEST IN THE PLACE WHERE FOOD IS :)

# THE HUNGRY HOUSE

<input checked="" type="checkbox"/> Coffee	7	<input checked="" type="checkbox"/> Idly	4
<input type="checkbox"/> Americano	0	<input type="checkbox"/> Plain_Dosa	0
<input checked="" type="checkbox"/> Cappuccino	4	<input checked="" type="checkbox"/> Masala_Dosa	7
<input checked="" type="checkbox"/> Cheese_Cake	2	<input checked="" type="checkbox"/> Egg_Biryani	6
<input type="checkbox"/> Chocolate_Cake	0	<input checked="" type="checkbox"/> Chicken_Biryani	1
<input type="checkbox"/> Pineapple_Juice	0	<input type="checkbox"/> Chicken_Kabab	0
<input checked="" type="checkbox"/> Mango_Juice	1	<input checked="" type="checkbox"/> Veg_Noodles_Soup	2
<input type="checkbox"/> Roti	0	<input type="checkbox"/> Corn_Soup	0

Total	2060.0
Grand Total	1957.0

<input checked="" type="checkbox"/> Discount	5	Apply
Cash Pay	0	=
Return	0	

Total Receipt Reset Exit

Receipt

Receipt Ref: BILL438650 27/11/20 23:47:16

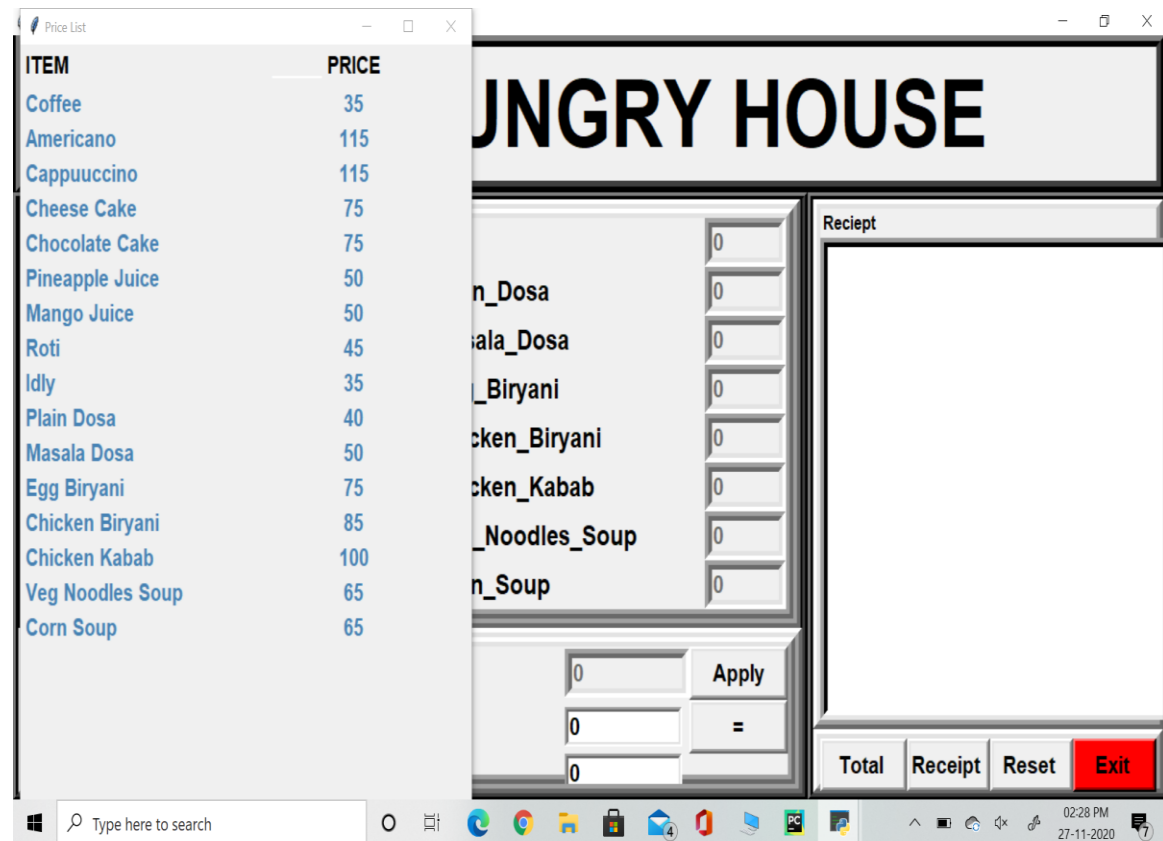
Item	Qty	Cost of itmes
Coffee:	7	245
Cappuccino:	4	460
Cheese_Cake:	2	150
Mango_Juice:	1	50
Idly:	4	140
Masala_Dosa:	7	350
Egg_Biryani:	6	450
Chicken_Biryani:	1	85
Veg_Noodles:	2	130
Sub_Total:		2060.0
Discount:		-103.0
Grand_Total:		1957.0

11:48 PM 27-11-2020

Screenshot 4 : receipt with discount

When a customer orders food and the discount 5% is given. Then click on button apply to calculate the total after applying the discount. And then click on total button to get the total amount after discount and then click on receipt button to generate the receipt.

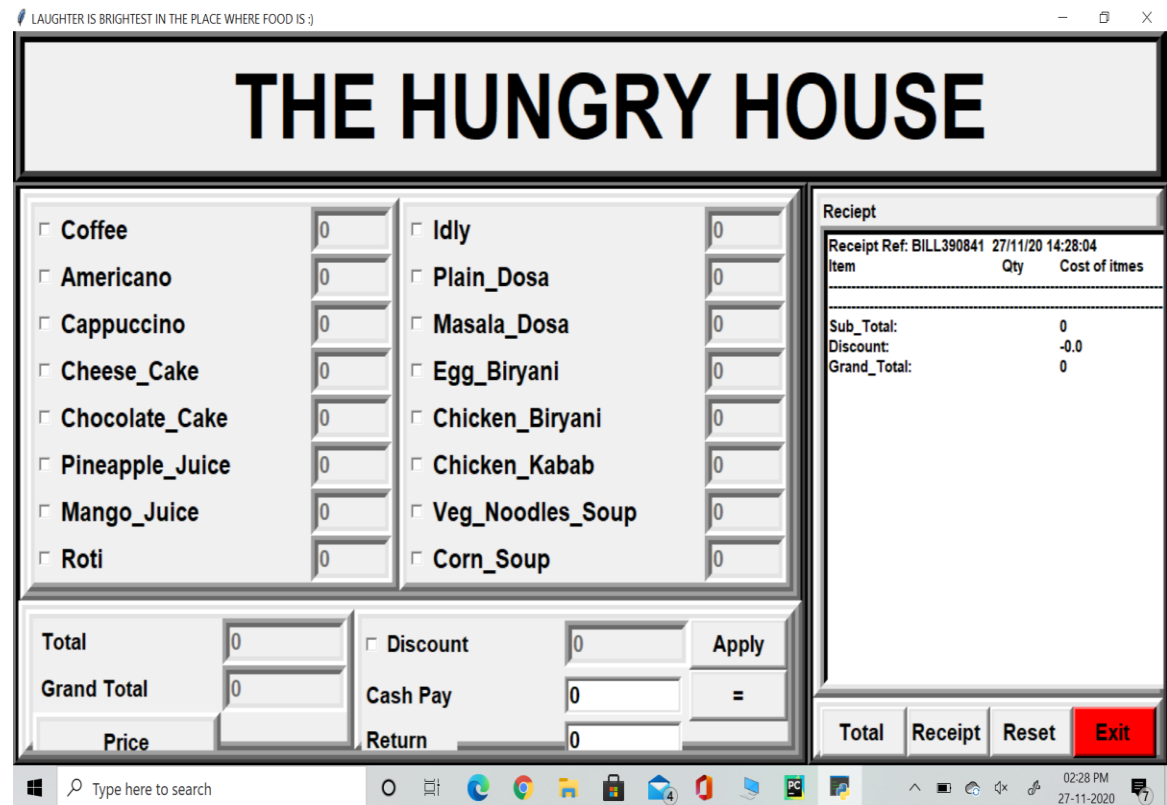
## 6.5 DISPLAY PRICE LIST



Screenshot 5 : menu

To display the price list click on price button. It opens a new window which contains item name and cost of each item.

## 6.6 RESET FUNCTION



Screenshot 6 : reset order

When a new customer orders we have to click on reset button to clear the previous order or previously generated bill.

## 6.7 CALCULATE FUNCTION

LAUGHTER IS BRIGHTEST IN THE PLACE WHERE FOOD IS :)

# THE HUNGRY HOUSE

<input checked="" type="checkbox"/> Coffee 7 <input type="checkbox"/> Americano 0 <input checked="" type="checkbox"/> Cappuccino 4 <input checked="" type="checkbox"/> Cheese_Cake 2 <input type="checkbox"/> Chocolate_Cake 0 <input type="checkbox"/> Pineapple_Juice 0 <input checked="" type="checkbox"/> Mango_Juice 1 <input type="checkbox"/> Roti 0	<input checked="" type="checkbox"/> Idly 4 <input type="checkbox"/> Plain_Dosa 0 <input checked="" type="checkbox"/> Masala_Dosa 7 <input checked="" type="checkbox"/> Egg_Biryani 6 <input checked="" type="checkbox"/> Chicken_Biryani 1 <input type="checkbox"/> Chicken_Kabab 0 <input checked="" type="checkbox"/> Veg_Noodles_Soup 2 <input type="checkbox"/> Corn_Soup 0	<b>Reciept</b> Receipt Ref: BILL438650 27/11/20 23:47:16 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Item</th> <th>Qty</th> <th>Cost of itmes</th> </tr> </thead> <tbody> <tr><td>Coffee:</td><td>7</td><td>245</td></tr> <tr><td>Cappuccino:</td><td>4</td><td>460</td></tr> <tr><td>Cheese_Cake:</td><td>2</td><td>150</td></tr> <tr><td>Mango_Juice:</td><td>1</td><td>50</td></tr> <tr><td>Idly:</td><td>4</td><td>140</td></tr> <tr><td>Masala_Dosa:</td><td>7</td><td>350</td></tr> <tr><td>Egg_Biryani:</td><td>6</td><td>450</td></tr> <tr><td>Chicken_Biryani:</td><td>1</td><td>85</td></tr> <tr><td>Veg_Noodles:</td><td>2</td><td>130</td></tr> <tr><td colspan="2"><b>Sub_Total:</b></td><td>2060.0</td></tr> <tr><td colspan="2"><b>Discount:</b></td><td>-103.0</td></tr> <tr><td colspan="2"><b>Grand_Total:</b></td><td>1957.0</td></tr> </tbody> </table>	Item	Qty	Cost of itmes	Coffee:	7	245	Cappuccino:	4	460	Cheese_Cake:	2	150	Mango_Juice:	1	50	Idly:	4	140	Masala_Dosa:	7	350	Egg_Biryani:	6	450	Chicken_Biryani:	1	85	Veg_Noodles:	2	130	<b>Sub_Total:</b>		2060.0	<b>Discount:</b>		-103.0	<b>Grand_Total:</b>		1957.0
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<b>Grand_Total:</b>		1957.0																																							

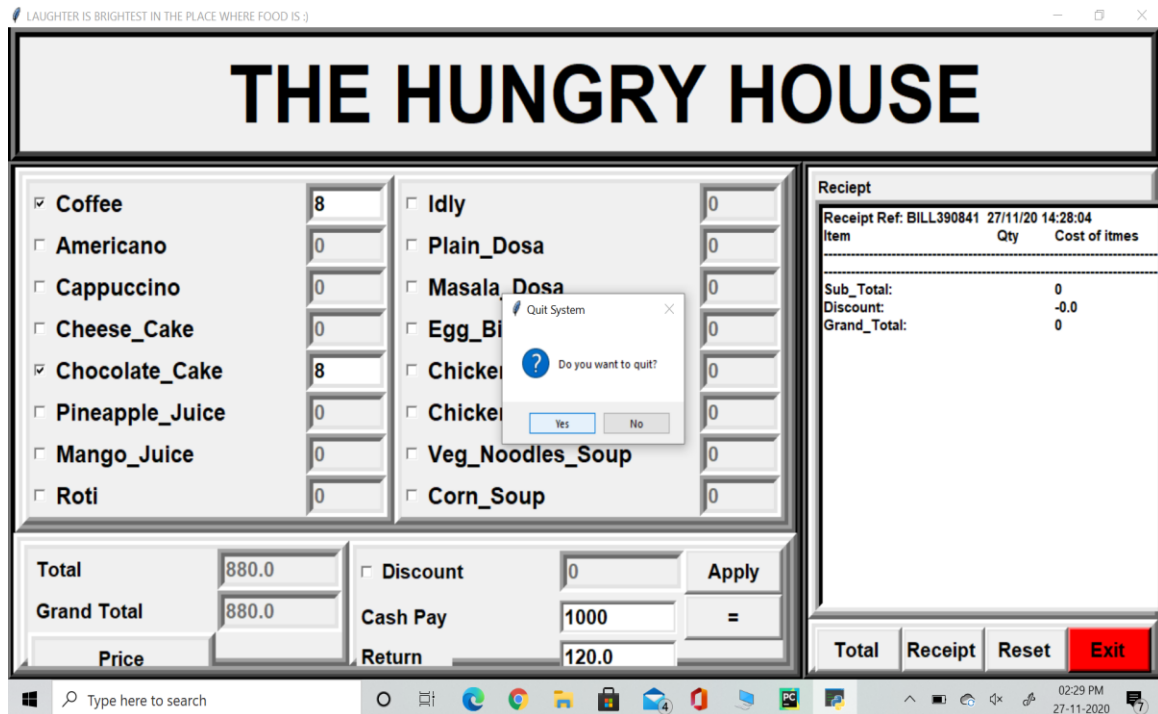
Total	2060.0	<input checked="" type="checkbox"/> Discount	5	Apply
Grand Total	1957.0	Cash Pay	3000	=
Price		Return	1043.0	

Total
Receipt
Reset
Exit

Screenshot 7 : calculate function

Cash pay , return and equals to are the three function which we use to calculate. If the total amount of the order is rs.880 and the customer gives rs.1000. then fill the amount customer given in entry of cashpay and then click on equals to button to display how much money should be returned to customer. Thus Rs.120 will be displayed in return entry box.

## 6.8 EXIT FUNCTION



Screenshot 8 : exit function

When we have to close the program execution then we have click on exit button which gives a pop message as "do you want to exit?". If the answer is yes then click on the "yes" button and if the answer is no then click on the "no" button.

## 6.9 RECORD OF RECIEPTS IN DATABASE

```

MySQL 8.0 Command Line Client
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.22 MySQL Community Server - GPL

Copyright (c) 2000, 2020, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use ramya;
Database changed
mysql> select * from the_hungry_house;
+-----+-----+-----+-----+-----+-----+-----+
| slno | billno | date   | time   | total | discount | grandtotal |
+-----+-----+-----+-----+-----+-----+-----+
| 1    | BILL426355 | 2020-12-12 | 20:48:14 | 1155.0 | 5         | 1097.25    |
| 2    | BILL438280 | 2020-12-12 | 20:48:14 | 755.0  | 0         | 755.0      |
| 3    | BILL53029  | 2020-12-12 | 20:48:14 | 1760.0 | 2         | 1724.8     |
| 4    | BILL220885 | 2020-12-12 | 20:49:51 | 795.0  | 1         | 787.05     |
| 5    | BILL243420 | 2020-12-12 | 20:49:51 | 5805.0 | 6         | 4704.7     |
| 6    | BILL289011 | 2020-12-12 | 20:49:51 | 5805.0 | 7         | 4704.7     |
| 7    | BILL107005 | 2020-12-12 | 20:49:51 | 6330.0 | 7         | 5886.9     |
| 8    | BILL457324 | 2020-12-12 | 20:49:51 | 6330.0 | 4         | 5886.9     |
| 9    | BILL497135 | 2020-12-12 | 20:49:51 | 7080.0 | 4         | 6796.8     |
| 10   | BILL165879 | 2020-12-12 | 20:49:51 | 7080.0 | 0         | 6796.8     |
| 11   | BILL180924 | 2020-12-12 | 20:49:51 | 7080.0 | 7         | 6796.8     |
| 12   | BILL472312 | 2020-12-12 | 20:49:51 | 4810.0 | 7         | 4473.299999999999 |
| 13   | BILL486490 | 2020-12-12 | 20:49:51 | 4810.0 | 4         | 4617.599999999999 |
| 14   | BILL305033 | 2020-12-12 | 20:49:51 | 5320.0 | 3         | 5160.4     |
| 15   | BILL278741 | 2020-12-12 | 20:49:51 | 6220.0 | 1         | 6033.4     |
| 16   | BILL189392 | 2020-12-12 | 20:49:51 | 24700.0 | 7         | 22971.0    |
| 17   | BILL396044 | 2020-12-12 | 20:49:51 | 31225.0 | 5         | 29663.75   |
| 18   | BILL268959 | 2020-12-12 | 20:55:10 | 19720.0 | 0         | 19720.0    |
| 19   | BILL79261  | 2020-12-12 | 20:55:10 | 19720.0 | 2         | 19325.6    |
| 20   | BILL389653 | 2020-12-12 | 20:55:10 | 12120.0 | 3         | 11756.4    |
| 21   | BILL165784 | 2020-12-12 | 20:55:10 | 9570.0  | 4         | 9187.199999999999 |
| 22   | BILL389086 | 2020-12-12 | 20:55:10 | 16995.0 | 6         | 15975.3    |
+-----+-----+-----+-----+-----+-----+-----+

```

Screenshot 9 : records in database

After generating each receipt, the receipt details gets stored in database.

## CONCLUSION

The Hungry House is developed using graphical user interface (gui) python and database management system to achieve the easy and simplified way to maintain the restaurant management system. This project is proposed to reduce the manual system which consumes lot of time and efforts and also which demands for labors and cost of labors is high. This project is made user friendly which can surely bring improvements in the Quick Restaurant Service. Over a short period of time, it will eliminate the traditional paper menu and with it, enhance the restaurant dining experience of every dinner.

The Hungry House brings a tremendous benefit to everyone. It benefits for restaurant managers by saving money and time and enhances the profits for the business. It benefits restaurant guests or customers by providing an easy and comfortable ordering and billing experiences.

## REFERENCE

### BOOK REFERENCE:

[1] The Python Language Reference Manual (version 3.2) - Guido van Rossum, and Fred L. Drake, Jr. (Editor), Network Theory Ltd, 120 pages (Revised November 2006)

[2] Python Pocket Reference, 5th Edition -Mark Lutz, O'Reilly Media, February 2014, 264 pages

[3] Python GUI Programming Cookbook

### WEB REFERENCE:

1. StackOverflow:[www.stackoverflow.com](http://www.stackoverflow.com)
2. [www.tutorialspoint.com](http://www.tutorialspoint.com)
3. <https://www.geeksforgeeks.org/python-gui-tkinter/>
4. <https://docs.python.org/2/library/tkinter.html>
5. [www.youtube.com](http://www.youtube.com)
6. [www.wikipedia.org](http://www.wikipedia.org)
7. [www.dev.mysql.com/doc/](http://www.dev.mysql.com/doc/)