Visvesvaraya Technological University

"Jnana Sangama", Belagavi – 590018.

Internship Report on

"PYTHON"

Submitted in partial fulfilment for the award of Degree of

Bachelor of Engineering

Submitted By

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Under the Guidance

Of

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Department of Computer Science & engineering

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Bengaluru-562157

2019-20

Sri Venkateshwara College of Engineering,

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CERTIFICATE

This is to Certify that the **Internship** work prescribed by the Visvesvaraya Technological University, Belagavi entitled "**PYTHON**" was carried out at **Evolet Technologies (NASSCOM)**, Bengaluru by **VARSHINI RAO V (1VE16CS112)** is a bonafide student of VIII Semester, Computer Science & Engineering, Sri Venkateshwara College of Engineering. This is in partial fulfilment for the award of Bachelor of Engineering in the Visvesvaraya Technological University, Belagavi during the academic year 2019-2020. It is certified that all corrections/suggestions indicated for internship work internal assessment have been incorporated in the report. The internship report has been approved as it satisfies the academic requirements in the respect of internship work prescribed for the said degree.

(Dr. S.C Lingareddy)
Prof. & Head
Dept. of CSE, SVCE,
Bengaluru

(Dr.Suresha)
Principal
SVCE, Bengaluru

Name of the Examiners — Signature with Date

1.

2.

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ACKNOWLEDGEMENT

Our most sincere and grateful thanks to **SRI VENKATESHWARA COLLEGE OF ENGINEERING ,** the temple of learning , for giving us an opportunity to pursue the B.E in Electronics and Communication Engineering and thus helping us to share our career. First and foremost, I would like to express our gratitude to **Dr. SURESHA**, **Principal, SVCE Bangalore** for his support in bringing this internship to completion.

I would like to extend our sincere thanks to **Dr. Sanjeev C Lingareddy, Prof. & HOD, Dept. of CSE, SVCE Bangalore,** for his suggestions which helped us to complete the internship.

I would like to express our gratitude To **Mr. PRAKHAR GUPTA, PYTHON DEVELOPER, Evolet Technologies, Bangalore,** for the guidance and assistance rendered by him.

ABSTRACT

The project PRODUCT STOCK MANAGEMENT is designed to handle the warehousing stocks and this software application maintain the records that include good stock going in and out and other related issues.

The present system is based on manual technique and this project tends to automate the system so that maintaining the records of good stock, goods in and got out becomes easier than before. To maintain the stock records also this software is the most ideal. Transactions that are related to returns, goods out and goods in can be maintained manually and presently the mountain of customers and suppliers accounts are also done in the manual system.

All these processes should be done in an automated manner and for that we require an application so that all the data can be logically and relatively used for accurate outcomes. This system should able to replace the existing technique without any specific moderation and problems.

CHAPTER 1

INTRODUCTION

This internship report briefs about my one month internship at Evolet Technologies. During this period I was trained in Tkinter using Python. I was trained to develop simple codes on Tkinter using Python Libraries. This Internship helped me to learn how to create and edit using multiple options for developing GUI, which seems to be acquiring high popularity among programmers these days for its ease to create a complete window.

1.1 ABOUT THE COMPANY

Evolet Technologies-A Division of Red18Tech is a Software Development (global IT solutions) company started with set of people with 67 man years of experience with business acumen in providing a user friendly feature and customized solutions for small, medium and large businesses.

It provides full-cycle services in the areas of

- Customized software development
- Web designing, web development
- Search Engine Optimisation
- Software solutions and services.

Combining its solid business domain experience, technical expertise, profound knowledge of latest industry trends and quality-driven delivery model it offer progressive end-to-end web solutions. Evolet Technologies is a global IT Solutions provider offering various customized solutions for small, medium and large businesses.

They provide end to end services in the areas of Software development, web designing, web development, SEO-Search Engine Optimisation and other software training solutions and services.

They offer quality driven delivery model that is progressive in nature. Their strength lies with their superior knowledge of industry verticals, which helps them deliver value to their customers through their quality solutions and services.

1.2 OBJECTIVES OF INTERNSHIP

Tkinter is the standard GUI library for Python. Python when combined with Tkinter provides a fast and easy way to create GUI applications. Tkinter provides a powerful object-oriented interface to the Tk GUI toolkit.

My objectives were as follows-

Creating a GUI application using Tkinter. All we need to do is perform the following steps −

- Import the *Tkinter* module.
- Create the GUI application main window.
- Add one or more of the above-mentioned widgets to the GUI application.
- Enter the main event loop to take action against each event triggered by the user.

Tkinter provides various controls, such as buttons, labels and text boxes used in a GUI application. These controls are commonly called widgets. All Tkinter widgets have access to specific geometry management methods, which have the purpose of organizing widgets throughout the parent widget area.

CHAPTER 2

ABOUT THE PROJECT

2.1 OVERVIEW OF THE PROJECT

- The **Stock Management and billing System** project is software which is helpful for the businesses stores, where store owner keeps the records of stock and generates bills for customers.
- This project eliminates the paperwork, human faults, manual delay and speed up the process.
- Stock Management System will have the ability to track availablility of stock.
- This is simple, fast and intelligent Stock management that can be used by anyone who has a smartphone.
- We can add, update and delete the details of stock. This is done by the admin after logging in.
- Billing is done using software which reduces human efforts and also allows us to keep a track of the total sales.

2.2 THE PROBLEM STATEMENT

- The stock maintenance system must take care of sales information of the company and must analyze the potential of the trade.
- It maintains the number of items that are added or removed.
- The sales person initiates this use case.
- The sales person is allowed to update information and view the database.

2.3 PURPOSE:

- The entire process of Stock maintenance is done in a manual manner Considering the fact that the number of customers for purchase is increasing every year, a maintenance system is essential to meet the demand.
- So this system uses several programming and database techniques to elucidate the work involved in this process.

2.4 GOALS :

- Includes objectives such as keeping costs controlled, increasing profits, reducing theft, managing cash flow and ensuring that the end customer always has a way to get their hands on the products they want and need.
- The objective of inventory management is to provide information.

2.5 ADVANTAGES OF PROPOSED SYSTEM

The system is very simple in design and implement. The system requires low system resources system will work in all configurations.

- Achieve efficiency and productivity in operations.
- Minimize **inventory** costs and maximize sales & profits.
- Integrate your entire business.
- Automation of manual tasks.
- Maintain customer happiness.

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CHAPTER 3

IMPLEMENTATION

3.1 SOFTWARE AND HARDWARE REQUIREMENTS

SOFTWARE REQUIREMENTS

- Operating system: Windows XP/2007/2010
- Language used: Python
- Software required: IDLE, Jupyer Notebook for python, MySql
- Required libraries: Tkinter,Xampp,PyMysql

HARDWARE REQUIREMENTS

- Processor: Pentium-IV
- Speed: 1.1 GHz
- RAM: 256 MB
- Hard disk: 20 GB

CHAPTER 4

TECHNOLOGIES USED

4.1 PYTHON

Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. Python is the language used to build the Django framework. It is a dynamic scripting language similar to Perl and Ruby. The principal author of Python is Guido van Rossum. Python supports dynamic typing and has a garbage collector for automatic memory management. Another important feature of Python is dynamic name solution which binds the names of functions and variables during execution.

ADVANTAGES :

- Presence of third-party modules
- Extensive support libraries(NumPy for numerical calculations, Pandas for data analytics etc)
- Open source and community development
- Easy to learn
- User-friendly data structures
- High-level language
- Dynamically typed language(No need to mention data type based on value assigned, it takes data type)
- Object-oriented language
- Portable and Interactive
- Portable across Operating systems

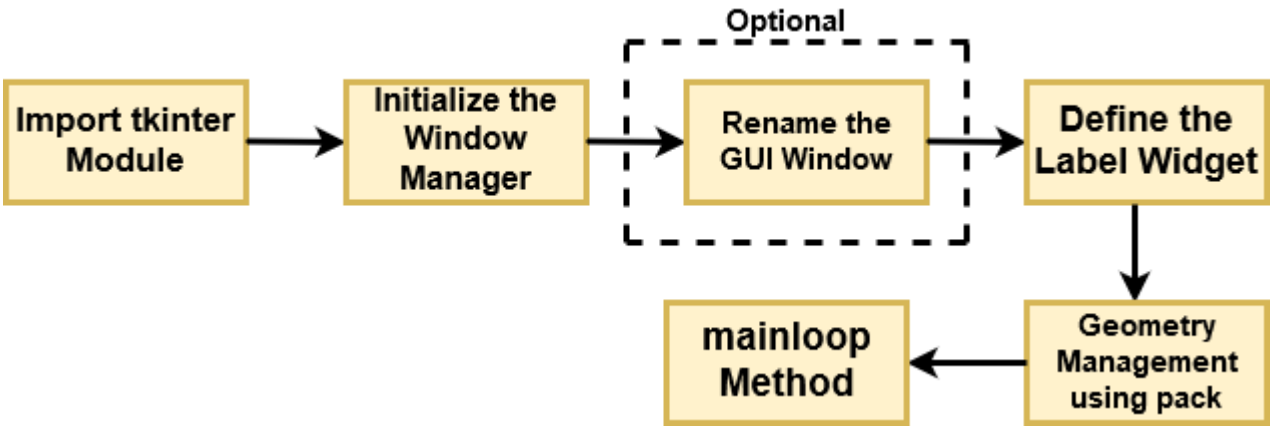
APPLICATIONS :

- GUI based desktop applications(Games, Scientific Applications)
- Web frameworks and applications
- Enterprise and Business applications
- Operating Systems
- Language Development
- Prototyping

4.2 TKINTER:

- **Tkinter** commonly comes bundled with Python, using Tk and is Python's standard GUI framework. It is famous for its simplicity and graphical user interface. It is open-source and available under the Python License.
- Tkinter comes pre-installed with Python3, and you need not bother about installing it.

Now, let's build a very simple GUI with the help of Tkinter and understand it with the help of a flow diagram.



Flow Diagram for Rendering a Basic GUI

- **Tkinter** is a Python binding to the Tk GUI toolkit. It is the standard Python interface to the Tk GUI toolkit, and is Python's de facto standard GUI. Tkinter is included with standard Linux, Microsoft Windows and Mac OS X installs of Python.
- The name Tkinter comes from Tk interface. Tkinter was written by Fredrik Lundh.
- Tkinter is free software released under a Python license.

4.3 MySQL:

- **MySQL** is an open-source relational database management system (RDBMS).
- MySQL is free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL was owned and sponsored by the Swedish company MySQL AB, which was bought by Sun Microsystems (now Oracle Corporation).

4.4 CODE SNIPPET:

LOGIN CODE:

```
from tkinter import *
from tkinter import messagebox
from PIL import ImageTk     #Pillow
from ims_stock import Stock
import pymysql


class login_system:
    def __init__(self,root):
        self.root=root
        self.root.title("Login System")
        self.root.geometry("1350x700+0+0")


        #==========All images==========#
```

```
        self.bg_icon=ImageTk.PhotoImage(file="images/bg.png")
        self.user_icon=ImageTk.PhotoImage(file="images/man-user.png")
        self.pass_icon=ImageTk.PhotoImage(file="images/password.png")
        self.logo_icon=ImageTk.PhotoImage(file="images/logo.png")

        #==========Variables============#
        self.uname=StringVar()
        self.pass_=StringVar()

        bg_lbl=Label(self.root,image=self.bg_icon).pack()

        title=Label(self.root,text="Login System",font=("times new roman",40,"bold"),bg="yellow",fg="red",bd=10,relief=GROOVE)
        title.place(x=0,y=0,relwidth=1)

        Login_Frame=Frame(self.root,bg="white")
        Login_Frame.place(x=450,y=250)

        logolbl=Label(Login_Frame,image=self.logo_icon,bd=0).grid(row=0,columnspan=2,pady=20)

        lbluser=Label(Login_Frame,text="  Username",image=self.user_icon,compound=LEFT,font=("times new roman",20,"bold"),bg="white").grid(row=1,column=0,padx=20)

txtuser=Entry(Login_Frame,textvariable=self.uname,bd=5,relief=GROOVE,font=("",15)).grid(row=1,column=1,padx=20)

        lblpass=Label(Login_Frame,text="  Password",image=self.pass_icon,compound=LEFT,font=("times new roman",20,"bold"),bg="white").grid(row=2,column=0,padx=20)
```

```
txtpass=Entry(Login_Frame,show="*",textvariable=self.pass_,bd=5,relief=GROOVE,font=("",15)).grid(row=2,column=1,padx=20)


    btn_log=Button(Login_Frame,command=self.login,text="Login",width=15,font=("times new roman",14,"bold"),bg="yellow",fg="red").grid(row=3,column=1,pady=10)


  def login(self):
    if self.uname.get()=="" or self.pass_.get()=="":
      messagebox.showerror("Error","All fields are required")
      return
    con=pymysql.connect(host="localhost",user="root",password="",database="ims")
    cur=con.cursor()
    statement=f"select * from users where username='{self.uname.get()}' and pass='{self.pass_.get()}'"
    cur.execute(statement)
    rows=cur.fetchall()
    if len(rows)==0:
      messagebox.showerror("Error","Invalid username or password")
      return
    messagebox.showinfo("Successful","Welcome ")
    for widget in self.root.winfo_children():
      widget.destroy()
    self.root=Stock(self.root)
    con.commit()
    con.close()


root=Tk()
obb=login_system(root)
root.mainloop()
```

STOCK DISPLAY CODE:

```
from tkinter import *
from tkinter import messagebox
from PIL import ImageTk     #Pillow
from ims_stock import Stock
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class login_system:
    def __init__(self,root):
        self.root=root
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        self.root.geometry("1350x700+0+0")

        #===========All images=============#
        self.bg_icon=ImageTk.PhotoImage(file="images/bg.png")
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        rows=cur.fetchall()
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        if len(rows)==0:
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            widget.destroy()
        self.root=Stock(self.root)
        con.commit()
        con.close()


root=Tk()
obb=login_system(root)
root.mainloop()
```

CHAPTER 5

TESTING

5.1 TESTING

Software testing is a critical element of the ultimate review of specification design and coding. Testing of software leads to the discovery of errors in the software's functions and to verify if the performance requirements are met. Testing also provides a good indication of software reliability and software quality as a whole. The result of different phases of testing are evaluated and then compared with the expected results. If the errors are uncovered, they are debugged and corrected. A standard approach to software testing has these generic characteristics:

- Various testing techniques are appropriate at different points of time.
- Testing and debugging are different activities, but debugging must be accommodate in the testing strategy.

Following three approaches of debugging were used:

- Debugging by Induction
- Debugging by Deduction
- Backtracking

5.2 TEST PLANS

In this test plan all major activities are described below:

- Unit testing.
- Integration testing.
- Validation testing.
- System testing.

CHAPTER 6

SNAPSHOTS

Fig 6.1 Login System

Fig 6.2 Stock display

Fig 6.3 Adding Stock Details

Fig 6.4 Billing Software

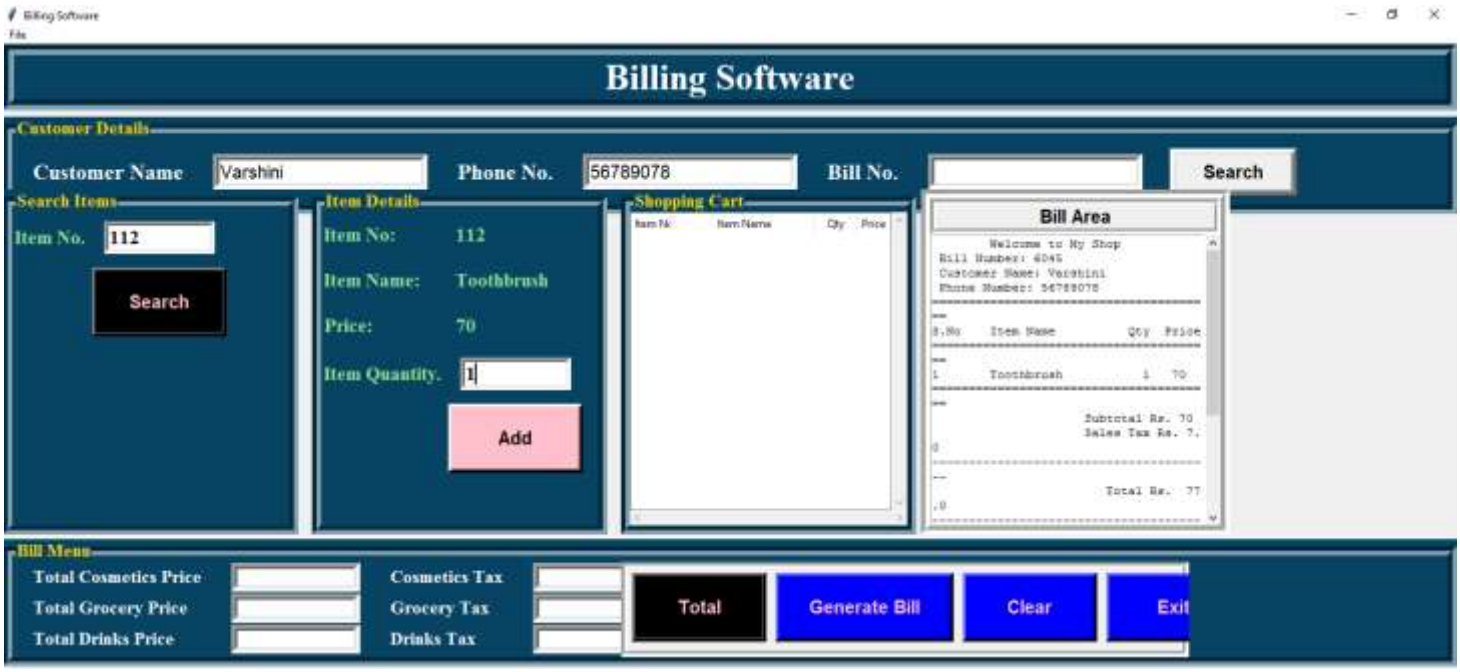

Fig 6.5 Bill Generated

CHAPTER 7

7.1 CONCLUSION

To sum it up, I believe the skills that I have learned during the internship will definitely aid me in the long run to face the challenges in a working environment. I could understand more about the definition of an IT developer and a programmer and prepare myself to become a responsible and innovative developer in the future. Along my training period, I realize that observation is a critical element to find the root cause of a problem ,not just in my project but also in my daily routine. During my internship, I worked together with my colleagues to determine the problems, the project indirectly helped me learn independently, discipline myself, taught me to be be considerate/patient, have self-confidence, take initiative and the ability to grasp the difficulty in the problems. This whole journey improved my communication skills, and gave me a sense of how corporate industry works. During my internship, I have received constructive criticism and advice from my collegues which has helped me grow positively.

I would like to thank everyone who made my internship a fruitful experience.

7.2 REFERENCES

- Python for everybody, Charles Severance
- https://www.tutorialspoint.com/mysql/
- https://www.apachefriends.org/
- https://www.youtube.com
- https://stackoverflow.com/
- https://www.w3schools.com/
- https://fontawesome.com/
- Database Management Systems (DBMS) by prof. ElMASRI AND NAVATHE

EvoletTechnologies

Date: 09-08-2019

INTERNSHIP COMPLETION CERTIFICATE

This is to certify that **Ms. Varshini Rao V** bearing **USN NO: 1VE16CS112** have undergone internship from **09-07-2019** to **08-08-2019** in **Python** at **EVOLET TECHNOLOGIES** under the NASSCOM Registration to fulfill the requirements for the award of degree.

We wish her all the best in her future endeavors.

For Evolet Technologies

Authorized Signatory

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