

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
Jnana Sangama, Belagavi-590018



Mini Project Report

on

“GST BILLING APPLICATION”

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

BACHELOR OF ENGINEERING
in
COMPUTER SCIENCE & ENGINEERING

for the academic year

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Submitted by

Jayatheertha S G
Vishwas Gowda H V

1AR19CS018
1AR19CS061

Under the guidance of
Mr. Ramesh Babu N
Associate Professor,
Dept. of CSE

AIEMS

BENGALURU

2021-22

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B.V.V. Sangha's

AMRUTA INSTITUTE OF ENGINEERING & MANAGEMENT SCIENCES
BIDADI, BENGALURU-562109, KARNATAKA

Department of Computer Science & Engineering

AIEMS **BENGALURU** **CERTIFICATE**

This is to certify that the mini project report entitled “**GST BILLING APPLICATION**” is a bonafide work carried out by **Jayatheertha S G [1AR19CS018]** and **Vishwas Gowda H V [1AR19CS061]** in partial fulfilment of award of **Bachelor of Engineering in Computer Science & Engineering** of the Visvesvaraya Technological University, Belagavi, during the academic year 2021-2022. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated. The mini project has been approved as it satisfies the academic requirements in respect to MAD Lab(18CSMP68) associated with the degree mentioned.

.....

Signature of Guide

Mr. Ramesh Babu N

Associate Professor,

Dept. of CSE

AIEMS, Bidadi

.....

Signature of HOD

Dr. M S Patel

Professor & Head,

Dept. of CSE

AIEMS, Bidadi

External

Examiner Name

Signature

1. _____

2. _____

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JAYATHEERTHA S G VISHWAS GOWDA H V
[1AR19CS018] [1AR19CS061]

DECLARATION

We, **JAYATHEERTHA S G[1AR19CS018]** and **VISHWAS GOWDA H V[1AR19CS061]** students of VI semester B.E, Department of Computer Science & Engineering, AMRUTA INSTITUTE OF ENGINEERING AND MANAGEMENT SCIENCES, Bengaluru, declare that mini project work entitled “**GST BILLING APPLICATION**” has been carried out by us and submitted in partial fulfillment of the course requirements for the award of degree in Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belgavi during the academic year 2021-2022. The matter embodied in this report has not been submitted to any other university or institution for the award of any degree.

Place:

Date:

JAYATHEERTHA S G
[1AR19CS018]

VISHWAS GOWDA H V
[1AR19CS061]

ABSTRACT

GST is characterized as the bigger backhanded expense structure intended to help and upgrade the financial development of a country. It would enthusiasm to comprehend why this proposed GST administration may hamper the development and advancement of the nation.

In this project I have developed an application software to manage the bill submission process in shop or organization. Manually it's very difficult to calculate different types of items with different GST value. This process is very difficult and time consuming. That's why I tried to develop a system which can calculate GST value of each and every product. This application is developed to manage the bill submission process in shop or organization. Using this system shop employee can generate bill with GST calculations for customer for his purchase and also print its bill copy for customer. The main purpose of this inventory maintenance and billing using GST system project is developing a system that automate the bill save.

TABLE OF CONTENTS

Acknowledgement	i
Declaration	ii
Abstract	iii
Table of Contents	iv
List of Figures	v
Chapter 1 INTRODUCTION	
1.1 Introduction to android	1
1.2 Problem Statement/ Aim	5
1.3 Scope	5
1.4 Project Description	5
Chapter 2 HARDWARE AND SOFTWARE REQUIREMENTS	
2.1 Software Requirements	7
2.2 Hardware Requirements	7
Chapter 3 DESIGN	
3.1 Objective of the project	8
3.2.1 Flow chart	9
3.2.2 System Design	10
3.3 Use case diagram	10
Chapter 4 IMPLEMENTATION	
4.1 Platform	11
4.2 Language	11
4.3 Code Snippets	12
Chapter 5 RESULT AND DISCUSSION	
5.1 Snapshots	23
Chapter 6 CONCLUSION AND FUTURE ENHANCEMENTS	28
BIBLIOGRAPHY	29

List of Figures

Figure no.	Title	Page no
1.1	Advantages of Android	2
3.1	Flow Chart	9
3.2	System Design	10
3.3	Use case Diagram	10
5.1	GST billing application logo	23
5.2	Enter customer details	24
5.3	Set Password	25
5.4	Customer purchase details	26
5.5	Mark as paid	27

CHAPTER 1**INTRODUCTION****1.1 Introduction to Android**

Android is an operating system and programming platform developed by Google for mobile phones and other mobile devices, such as tablets. It can run on many different devices from many different manufacturers. Android includes a software development kit (SDK) that helps you write original code and assemble software modules to create apps for Android users. Android also provides a marketplace to distribute apps. Altogether, Android represents an ecosystem for mobile apps.

Android is an open source and Linux-based Operating System for mobile devices such as smartphones and tablet computers. Android was developed by the Open Handset Alliance, led by Google, and other companies.

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android.

The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008.

improving the user interface, both in terms of functionality and performance. On June 27, 2012, at the Google I/O conference, Google announced the next Android version, 4.1 Jelly Bean. Jelly Bean is an incremental update, with the primary aim of

The source code for Android is available under free and open-source software licenses. Google publishes most of the code under the Apache License version 2.0 and the rest, Linux kernel changes, under the GNU General Public License version 2.

1.1.1 Android Development

The **Android operating system** is the largest installed base among various mobile platforms across the globe. Hundreds of millions of mobile devices are powered by **Android** in more than 190 countries of the world. It conquered around 75% of the global market share by the end of 2020, and this trend is growing bigger every other day

Google sponsored the project at initial stages and in the year 2005, it acquired the whole company. In September 2008, the first Android-powered device launched in the market. Android dominates the mobile OS industry because of the long list of features it provides.

It's user-friendly, has huge community support, provides a greater extent of customization, and a large number of companies build Android-compatible smart phones. As a result, the market observes a sharp increase in the demand for developing Android mobile applications, and with that companies need smart developers with the right skill set. At first, the purpose of Android was thought of as a mobile operating system. However, with the advancement of code libraries and its popularity among developers of the divergent domain, Android becomes an absolute set of software for all devices like tablets, wear able, set-top boxes, smart TVs, notebooks, etc.

1.1.2 Why Android?

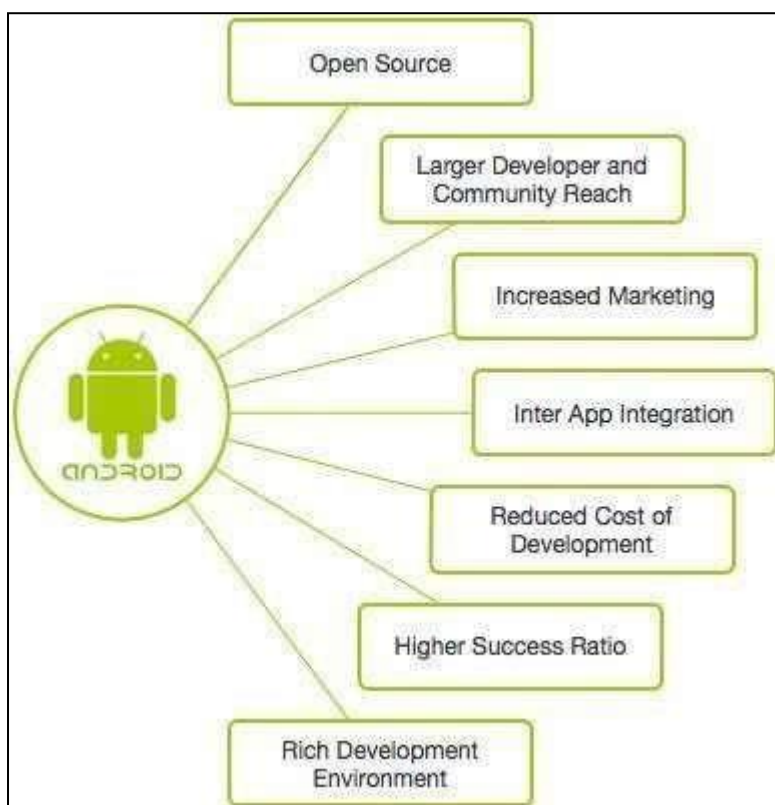


Fig 1.1: Advantages of Android

CG (Computer graphics) started with the display of data on hardcopy plotters and cathode ray tube screens soon after the introduction of computer themselves.

1.1.3 Android Applications

Android applications are usually developed in the Java language using the Android Software Development Kit.

Once developed, Android applications can be packaged easily and sold out either through a store such as **Google Play, Slide ME, Opera Mobile Store, Mobango, F- droid** and the **Amazon Appstore**.

Android powers hundreds of millions of mobile devices in more than 190 countries around the world. It's the largest installed base of any mobile platform and growing fast. Every day more than 1 million new Android devices are activated worldwide.

This tutorial has been written with an aim to teach you how to develop and package Android application. We will start from environment setup for Android application programming and then drill down to look into various aspects of Android applications.

1.1.4 Android Features

Android is a powerful open-source operating system which provides a lot of great features, those are

- It's open-source and we can customize the OS based on our requirements.
- It supports connectivity for GSM, CDMA, WIFI, NFC, Bluetooth, etc. for telephony or data transfer.
- By using WIFI technology we can pair with other devices using apps.
- It has a wide range of media supports like AVI, MPEG4, etc. to play or record a variety of audio/video and having a different image format like JPEG, PNG, GIF, MP3, etc. to perform playback or recording using camera and microphone
- It has an integrated open-source Web Kit layout-based web browser to support HTML5, CSS3
- It supports a multi-tasking.
- It will give a chance to reuse the application components and the replacement of native applications.
- It has support for 2D/3D Graphics

1.1.5 The challenges of Android app development.

While the Android platform provides rich functionality for app development, there are still a number of challenges you need to address, such as:

- Building for a multi-screen world
- Getting performance right
- Keeping your code and your users more secure
- Making sure your app is compatible with older platform versions

1.1.6 Applications

Applications is the top layer of android architecture. The pre-installed applications like home, contacts, camera, gallery etc. And third-party applications downloaded from the play store, like chat applications, games etc. will be installed on this layer only. It runs within the android runtime with the help of the classes and services provided by the application framework.

1.2 Problem Statement / Aim

In today's society, it's very hard to be competitive without using cutting edge technology available in market. After years of business, the data was grown much. It is becoming a challenge for a person to manage that data in an effective way.

To be more productive in order processing, we need a solution which can facilitate their current process with the use of technology and software. With increased number of orders, it becomes difficult for salesperson to manage orders in effective and efficient manner.

It is very hard to go through all paper work and back tracking orders. If there is any complain or review of any orders, it takes large amount of effort and time to back track and fix the problem. These results in loss of resource.

1.3 Scope

It is used to define and understand the current method of implementation, such as a system, a product etc. From this analysis, it is not uncommon to discover there is actually nothing wrong with the current system or product other than some misunderstandings regarding it overlaps it needs some simple modifications regarding it or perhaps it needs some simple modifications as opposed to a major service.

Currently in most of our shops or market does not use computers for performing their daily tasks. There is a limited number or shop that use Microsoft office products, such as MS word and MS excel for performing their daily inventory tasks. Most of them do not even have the information that computers can make a great difference in the way they are doing their t asks when they are programmed to do so. In the existing system all transactions, dealing of products, purchasing of products were done manually which time consuming. Reports are prepared manually when needed. Maintaining of reports are very difficult task and it is very difficult to know the status of the submitted bill calculation with GST.

1.4 Project Description

GST is applied to all the goods and services. GST is divided into four distinct tax rates,

5%, 12%, 18% and 28%. This GST Billing can be used by different types of users, such as customers, manufacturers, and wholesalers. In this primarily Users should register by giving business name, address and set the Password.

To calculate the GST the user should give the customer's name and phone then items, Quantity and GST percentage. We have options such as mark as paid, calls, delete, add more items etc.

CHAPTER 2**HARDWARE AND SOFTWARE REQUIREMENTS**

In the development of any software applications, we require some particular system configuration of software and hardware components. This configuration helps in achieving the proper execution.

The various requirements that are essential for this project are specified over here. These requirements have to be fulfilled for successful completion of the project. The purpose scope along with hardware and software requirements helps for proper execution.

2.1 Software Requirements

A software requirements description of a software system to be developed. This document enlists enough and necessary requirements that are required for the project development.

- Android development tool (ADL)
- Android studio
- XML
- Java development tool kit (JDK)
- SDK 7.0
- UML

2.2 Hardware Requirements

The project works with any IBM PC compatible with Intel or AMD processor.

Processor: Intel Pentium 4/50 Giga HZ

Memory: 512mb to 1gb

Operating System: windows 7/8/10

RAM: 4/8GB

Graphics Card: API.Fire GL

CHAPTER 3

DESIGN

The proposed system is intended to provide the facility of automating the inventory tasks such as item management and customer billing with a GST for the shop or market. This project is designed with a goal to making the existing system more informative, reliable, fast and easier.

3.1 OBJECTIVES OF THE PROJECT

- purchase, product details which are going out into market. Details are maintained in This project is a software application which is designing for managing sales, centralized database.
- The main objective of our project is to make efficient transaction management system which is user friendly and at the same time powerful.
- Making the system reliable, easier, faster and more informative an effective.
- It has capability to keep the complete information of a transaction.
- System plays an important role in achieving the desired plans availability at an optimum cost.
- To produce software which manages the sales activity done in a market, maintaining the details of the products and to maintain the records of the sale.

❖ Motivation

- GST Billing is the Open Source.
- It can be easily downloaded in play store.
- Manual calculations are more time consuming.
- It saves time and reduces the chances of manual errors while computing the cost of goods and services.

METHODOLOGY

Data were collected from different markets which same half of them use manual system while others use computerized system and customers of both type of markets. Interviewing the people who worked and have experienced how to manage market, to know the quality and the intensity of the information we need.

3.2.1 FLOW CHART

A flow chart is a diagrammatic representation of an algorithm, a step-by-step approach to solving a task. The flowchart shows the steps as boxes of various kinds and their order by converting the boxes with an arrow.

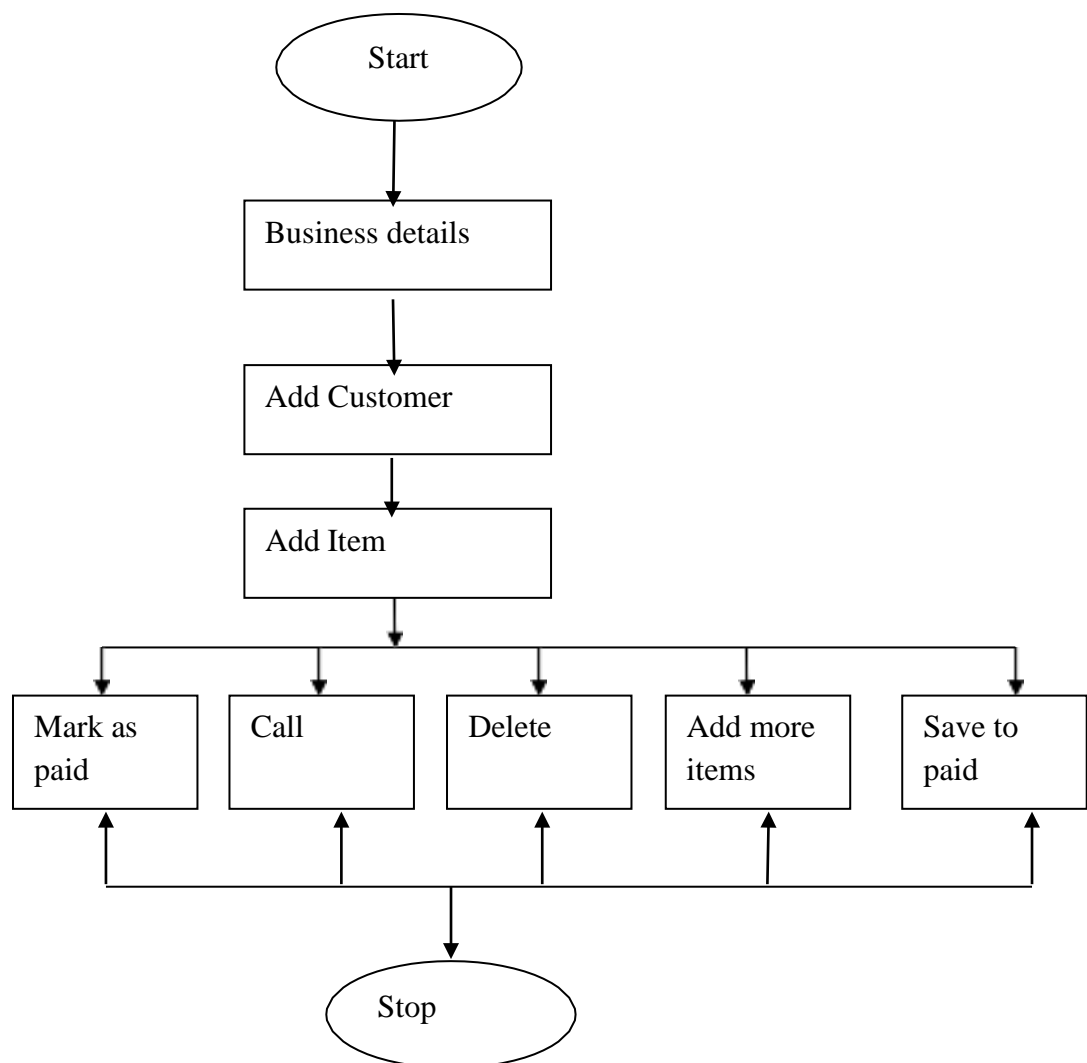


Fig 3.1: Flow chart

3.2.2 SYSTEM DESIGN

System design is the process of defining elements of a system like modules, architecture , components and their interfaces and data for a system based on the specified requirements . it is the process of defining , developing and designing systems which satisfies the specific needs and requirements of a business

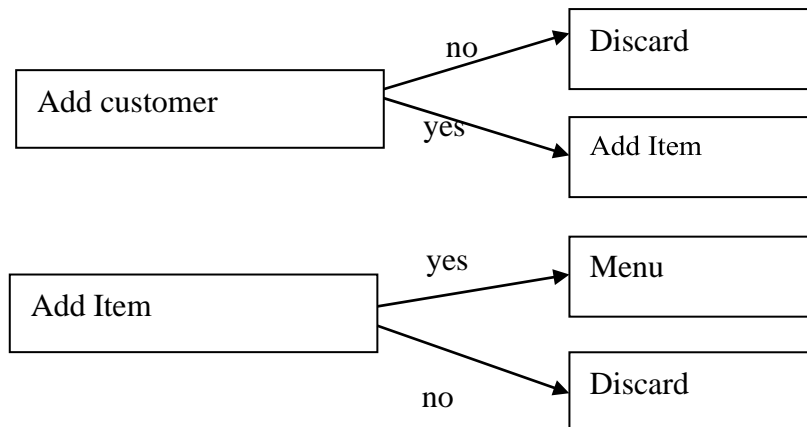
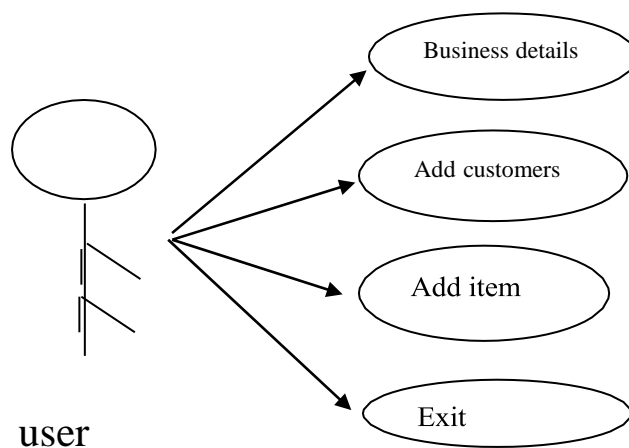


Fig 3.2: System Design

3.3 USE CASE DIAGRAM

Use case diagram is a graphical representation of a users possible interactions with a system. A use case diagram shows various use case and different types of users the system have and will have accomplished by other circles and ellipses. The actors are often shown as stick figures.



CHAPTER 4**IMPLEMENTATION**

Project implementation is the segment wherein visions and plans come to be a reality. This is the logical conclusion, after evaluating, deciding, visioning, planning, applying for finances, and finding the monetary resources of a challenge. The implementation degree of the project cycle is in many approaches the most critical, as it's miles in the course of this stage that planned advantages are delivered. All different stages within the cycle are therefore essentially supportive of this implementation stage. A task has to be implemented successfully while the allocation of undertaking obligations to the assignment team in the organization.

4.1 Platform

Windows 10 is a computer operating system by Microsoft as part of its Microsoft Windows family of operating systems. It was known as Threshold when it was being developed and announced at a press event on 30 September 2014. It came out for PC son 29 July 2015. Beginning on that day, Windows 10 was available as a free upgrade for users running Windows 7and Windows 8.1 for one year.

Windows 10 is designed to provide a common, "universal" user interface for various systems. These include desktop, laptop, and all-in-one PCs, tablet computers, smart phones, and embedded systems such as the Xbox game console. This allows Microsoft to integrate each type of platform with greater ease.

Microsoft releases updates every half a year, an example of the software as a service principle. Each release has a four-digit build number the first two digits referring to the year of release, and the other two digits referring to the month of release (eg: "1903" refers to a build released in March 2019).

4.2 Language

Java is a high-level, class-based, object-oriented programming language that is designed to have as few implementation dependencies as possible. It is a general- purpose programming language intended to let application developers write once, run anywhere meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to byte code that can run on any Java virtual.

4.3 CODE SNIPPETS

MainActivity.java & IntroActivity.java

```
package com.gstbilling;

import android.Manifest;
import android.content.Intent;
import android.content.SharedPreferences;
import android.content.pm.PackageManager;
import android.database.Cursor;
import android.graphics.Color;
import android.os.Build;
import android.os.Bundle;
import android.os.StrictMode;
import android.preference.PreferenceManager;
import android.support.design.widget.FloatingActionButton;
import android.support.v4.app.ActivityCompat;
import android.support.v4.app.LoaderManager;
import android.support.v4.content.CursorLoader;
import android.support.v4.content.Loader;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.view.Menu;
import android.view.MenuItem;
import com.taneja.ajay.gstbillig.data.GSTBillingContract;

public class BillsActivity extends AppCompatActivity implements
LoaderManager.LoaderCallbacks<Cursor>,
BillAdapter.BillItemClickListener {

    private RecyclerView unpaid RecyclerView;
    private BillAdapter adapter;
    private String billListStatus;
    private int billDividerColor;
    private String billSortOrder;
    private static final int BILL_LOADER_ID = 100;
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_bills);
    Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);
    setSupportActionBar(toolbar);
    if(savedInstanceState != null){
        billListStatus=savedInstanceState.getString(GSTBillingContract.GSTBillingEntry.PRIMARY_
        COLUMN_ STATUS);
    }else {
        billListStatus = GSTBillingContract.BILL_STATUS_UNPAID;
    }
    StrictMode.VmPolicy.Builder builder = new StrictMode.VmPolicy.Builder();
    StrictMode.setVmPolicy(builder.build());
    isStoragePermissionGranted();
    switch (billListStatus){
        case GSTBillingContract.BILL_STATUS_PAID:
            getSupportActionBar().setTitle(R.string.paid_bills_title);
            billDividerColor = Color.GREEN;
            billSortOrde="DESC";
            break;
    }
    case GSTBillingContract.BILL_STATUS_UNPAID:
        getSupportActionBar().setTitle(R.string.unpaid_bills_title);
        billDividerColor = Color.RED;
        billSortOrder = " ASC"; break;
    FloatingActionButton fab = (FloatingActionButton) findViewById(R.id.fab_unpaid);
    fab.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            startActivity(new Intent(BillsActivity.this, NewBillCustomerActivity.class));
        }
    });
    checkPasswordSetup();
    unpaidRecyclerView = (RecyclerView) findViewById(R.id.unpaid_recycler_view);
    unpaidRecyclerView.setLayoutManager(new LinearLayoutManager(this));
```

```
unpaidRecyclerView.setHasFixedSize(true);
adapter = new BillAdapter(this, this, billDividerColor);
unpaidRecyclerView.setAdapter(adapter);
getSupportLoaderManager().initLoader(BILL_LOADER_ID, null, this);
}
private void checkPasswordSetup() {
    SharedPreferences prefs = PreferenceManager.getDefaultSharedPreferences(this);
    if(prefs.getString(SetupPasswordActivity.SETUP_PASSWORD_KEY, null) == null){
        Intent intent = new Intent(this, SetupPasswordActivity.class);
        startActivity(intent); finish();
    }
}

public boolean isStoragePermissionGranted(){ if(Build.VERSION.SDK_INT >= 23){
    if(checkSelfPermission(Manifest.permission.WRITE_EXTERNAL_STORAGE) ==
        PackageManager.PERMISSION_GRANTED){
        return true;
    }else{
        ActivityCompat.requestPermissions(this, new
            String[]{Manifest.permission.WRITE_EXTERNAL_STORAGE}, 1);
        return false;
    }
} else{
    return true;
}
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_bills_list, menu);
    if(billListStatus.equals(GSTBillingContract.BILL_STATUS_PAID)){
        menu.findItem(R.id.action_swap_bills_list).setTitle(R.string.action_show_unpaid_bills);
    }
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
```

```

// Handle action bar item clicks here. The action bar will
// automatically handle clicks on the Home/Up button, so long
// as you specify a parent activity in AndroidManifest.xml. int id = item.getItemId();
if(id == R.id.action_swap_bills_list){
    switch (billListStatus){
        case GSTBillingContract.BILL_STATUS_UNPAID: billListStatus =
        GSTBillingContract.BILL_STATUS_PAID;
        item.setTitle(getString(R.string.action_show_unpaid_bills));
        getSupportActionBar().setTitle(getString(R.string.paid_bills_title));
        billDividerColor = Color.GREEN;
        billSortOrder = " DESC"; break;
        case GSTBillingContract.BILL_STATUS_PAID:
        billListStatus = GSTBillingContract.BILL_STATUS_UNPAID;
        item.setTitle(getString(R.string.action_show_paid_bills));
        getSupportActionBar().setTitle(getString(R.string.unpaid_bills_title));
        billDividerColor = Color.RED;
        billSortOrder = " ASC"; break;
    }
    getSupportLoaderManager().restartLoader(BILL_LOADER_ID, null, this);
}
return super.onOptionsItemSelected(item);
}

@Override
public Loader<Cursor> onCreateLoader(int id, Bundle args) { switch (id)
case BILL_LOADER_ID: return new CursorLoader(
this, GSTBillingContract.GSTBillingEntry.CONTENT_URI, null,
GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_STATUS + "=" + billListStatus
+ "", null,
GSTBillingContract.GSTBillingEntry._ID + billSortOrder
);
default:
throw new RuntimeException("Loader not implemented: " + id);
}
}

@Override
public void onLoadFinished(Loader<Cursor> loader, Cursor data) { adapter.swapCursor(data,

```

```
billDividerColor);
}
@Override
public void onLoaderReset(Loader<Cursor> loader) { adapter.swapCursor(null, Color.RED);
}
@Override
public void onBillItemClick(String clickedBillId,String customerName,String
phoneNumber) {
Intent detailIntent = new Intent(this, DetailActivity.class);
detailIntent.putExtra(GSTBillingContract.GSTBillingEntry._ID, clickedBillId);
detailIntent.putExtra(GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_STATU S,
billListStatus);
detailIntent.putExtra(GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_NAME,
customerName);
detailIntent.putExtra(GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_PHONE
_NUMBER, phoneNumber);
startActivity(detailIntent);
}
@Override
protected void onSaveInstanceState(Bundle outState) {
outState.putString(GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_STATUS,
billListStatus);
super.onSaveInstanceState(outState);
}
}
```

```
package com.gstbilling;
import android.content.ContentValues;
import android.content.Intent;
import android.net.Uri;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
```

```
import android.widget.AdapterView;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;

import com.taneja.ajay.gstbilling.data.GSTBillingContract.GSTBillingCustomerEntry;
import com.taneja.ajay.gstbilling.data.GSTBillingContract.GSTBillingEntry;
import com.taneja.ajay.gstbilling.data.GSTBillingContract;
import java.text.SimpleDateFormat; import java.util.ArrayList;
import java.util.Date; import java.util.List;

public class NewBillActivity extends AppCompatActivity {
    public static boolean addingMoreItems = false;
    private Spinner taxSlabSpinner; private EditText itemDescription;
    private EditText finalPriceEt; private EditText quantityEt;
    private Button finishBtn;
    private int taxSlab; List<ContentValues> cvList;
    @Override
    protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_new_bill);
        taxSlabSpinner = (Spinner) findViewById(R.id.tax_slab_spinner);
        setupTaxSpinner();
        itemDescription = (EditText) findViewById(R.id.new_item_value);
        finalPriceEt = (EditText) findViewById(R.id.new_final_price_value);
        quantityEt = (EditText) findViewById(R.id.new_quantity_value);
        finishBtn = (Button) findViewById(R.id.finish_btn);
        finishBtn.setEnabled(false);
        if(getIntent().hasExtra(DetailActivity.EDITING_ITEM)){
            getSupportActionBar().setTitle(R.string.action_edit_bill_item_label);
            findViewById(R.id.add_to_bill_btn).setVisibility(View.GONE);
            finishBtn.setVisibility(View.GONE);
            final Intent editIntent = getIntent();
            final int idValue = editIntent.getIntExtra(GSTBillingCustomerEntry._ID, 0);
            String itemDescriptionValue =
                editIntent.getStringExtra(GSTBillingCustomerEntry.SECONDARY_COLUMN_ITEM_DES
                    CRPTION);
```



```
float finalPriceValue =
editIntent.getFloatExtra(GSTBillingCustomerEntry.SECONDARY_COLUMN_FINAL_PRICE, 0f);
int quantityValue =
editIntent.getIntExtra(GSTBillingCustomerEntry.SECONDARY_COLUMN_QUANTITY, 0);
itemDescription.setText(itemDescriptionValue); finalPriceEt.setText(String.valueOf((int)
finalPriceValue));
quantityEt.setText(String.valueOf(quantityValue));
Button doneEditingBtn = (Button) findViewById(R.id.done_edit_item_btn);
doneEditingBtn.setVisibility(View.VISIBLE);
doneEditingBtn.setOnClickListener(new View.OnClickListener() {
@Override
public void onClick(View v) { if(itemDescription.getText().toString().length() == 0){
itemDescription.setText("NA");
}
if(finalPriceEt.getText().toString().length() == 0){
finalPriceEt.requestFocus();
Toast.makeText(NewBillActivity.this,
getString(R.string.enter_final_price_error), Toast.LENGTH_SHORT).show(); return;
}
if(quantityEt.getText().toString().length() == 0){ quantityEt.setText("1");
}
ContentValues cv = new ContentValues();
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_ITEM_DESCRIPTION,
itemDescription.getText().toString());
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_FINAL_PRICE,
Integer.parseInt(finalPriceEt.getText().toString()));
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_QUANTITY,
Integer.parseInt(quantityEt.getText().toString()));
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_TAX_SLAB,taxSlab);
getContentResolver().update(
GSTBillingEntry.CONTENT_URI.buildUpon().appendPath(editIntent.getStringExtra(Detail
Activity.EDITING_ITEM)).appendPath(String.valueOf(idValue)).build(),
cv, null, null
);
ContentValues contentValues = new ContentValues();
```

```
contentValues.put(GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_STATUS,
GSTBillingContract.BILL_STATUS_UNPAID);
getContentResolver().update(
GSTBillingContract.GSTBillingEntry.CONTENT_URI.buildUpon().appendPath(editIntent.getStringExtra(DetailActivity.EDITING_ITEM)).build(),contentValues,
GSTBillingContract.GSTBillingEntry._ID+"="+editIntent.getStringExtra(DetailActivity.EDITING_ITEM),null);
DetailActivity.changeBillStatus();
finish();
}
});
}else{
cvList = new ArrayList<>();
}
}

private void setupTaxSpinner() {
ArrayAdapter<CharSequence>adapter=ArrayAdapter.createFromResource(this,
R.array.tax_slab_list_array,
android.R.layout.simple_spinner_item);
adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
taxSlabSpinner.setAdapter(adapter);
taxSlabSpinner.setOnItemClickListener(new AdapterView.OnItemClickListener()
{
@Override
public void onItemClick(AdapterView<?> parent, View view, int position, long id)
{
switch (position){ case 0:
taxSlab = 28; break;
case 1:
taxSlab = 18; break;
case 2:
taxSlab = 12; break;
case 3:
taxSlab = 5; break;
}
}
```

```
@Override
public void onNothingSelected(AdapterView<?> parent) { taxSlab = 28;
}
});
}
public void addToBill(View view){ if(itemDescription.getText().toString().length() == 0){
itemDescription.setText("NA");
}
if(finalPriceEt.getText().toString().length() == 0){ finalPriceEt.requestFocus();
Toast.makeText(this, getString(R.string.enter_final_price_error),
Toast.LENGTH_SHORT).show();
return;
}
if(quantityEt.getText().toString().length() == 0){ quantityEt.setText("1");
}
ContentValues cv = new ContentValues();
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_ITEM_DESCRIPTION,
itemDescription.getText().toString());
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_FINAL_PRICE,
Integer.parseInt(finalPriceEt.getText().toString()));
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_QUANTITY,
Integer.parseInt(quantityEt.getText().toString()));
cv.put(GSTBillingCustomerEntry.SECONDARY_COLUMN_TAX_SLAB, taxSlab);
cvList.add(cv);
Toast.makeText(this,getString(R.string.item_added_success),
Toast.LENGTH_SHORT).show();
itemDescription.setText(""); finalPriceEt.setText(""); quantityEt.setText("");
finishBtn.setEnabled(true);
itemDescription.requestFocus();
}
public void finishAddingItems(View view){
// Check if any item is added in Selling price EditText before finishing the bill
if(finalPriceEt.getText().toString().length() != 0){
Toast.makeText(this,    getString(R.string.add_item_to_bill_error),
Toast.LENGTH_SHORT).show();
return;
}
```

```
}  
if(!getIntent().hasExtra(DetailActivity.ADDING_MORE_ITEMS)){  
    // Inserting customer details in primary table Intent intent = getIntent();  
    String    customerName    =  
    intent.getStringExtra(NewBillCustomerActivity.ADD_CUSTOMER_NAME_KEY);  
    String    phoneNumber =  
    intent.getStringExtra(NewBillCustomerActivity.ADD_CUSTOMER_PHONE_KEY);  
    String billDate = new SimpleDateFormat("dd-MM-yyyy").format(new Date()); String  
    billStatus = GSTBillingContract.BILL_STATUS_UNPAID;  
    ContentValues contentValues = new ContentValues();  
    contentValues.put(GSTBillingEntry.PRIMARY_COLUMN_NAME,  
    customerName);  
    contentValues.put(GSTBillingEntry.PRIMARY_COLUMN_PHONE_NUMBER,  
    phoneNumber);  
    contentValues.put(GSTBillingEntry.PRIMARY_COLUMN_DATE, billDate);  
    contentValues.put(GSTBillingEntry.PRIMARY_COLUMN_STATUS, billStatus);  
    Uri idUri = getContentResolver().insert(GSTBillingEntry.CONTENT_URI, contentValues);  
    // Inserting item details in secondary table String id = idUri.getLastPathSegment();  
    getContentResolver().bulkInsert(GSTBillingContract.GSTBillingEntry.CONTENT_URI.buildUpon().appendPath(id).build(),  
    cvList.toArray(new ContentValues[cvList.size()]));  
    // Opening detail activity  
    Intent detailIntent = new Intent(this, DetailActivity.class);  
    detailIntent.putExtra(GSTBillingEntry._ID, id);  
    detailIntent.putExtra(GSTBillingEntry.PRIMARY_COLUMN_NAME,  
    customerName);  
    detailIntent.putExtra(GSTBillingEntry.PRIMARY_COLUMN_PHONE_NUMBER,  
    phoneNumber);  
    detailIntent.putExtra(GSTBillingEntry.PRIMARY_COLUMN_STATUS,  
    GSTBillingContract.BILL_STATUS_UNPAID);  
    startActivity(detailIntent);  
    finish();  
}else {  
    addingMoreItems = true;  
    String id = getIntent().getStringExtra(GSTBillingEntry._ID);  
    getContentResolver().bulkInsert(GSTBillingContract.GSTBillingEntry.CONTENT_URI.buildUpon().appendPath(id).build(),  
    cvList.toArray(new ContentValues[cvList.size()]));  
}
```

```
dUpon().appendPath(id).build(),
cvList.toArray(new ContentValues[cvList.size()])); ContentValues contentValues = new
ContentValues();
contentValues.put(GSTBillingContract.GSTBillingEntry.PRIMARY_COLUMN_STATUS,
GSTBillingContract.BILL_STATUS_UNPAID);
getContentResolver().update(
GSTBillingContract.GSTBillingEntry.CONTENT_URI.buildUpon().appendPath(String.valu
eOf(id)).build(),
contentValues, GSTBillingContract.GSTBillingEntry._ID + "=" + id,
null
);
DetailActivity.changeBillStatus();
finish();
}
}
@Override
public boolean onCreateOptionsMenu(Menu menu) {
getMenuInflater().inflate(R.menu.menu_bill, menu); return true;
}
@Override
public boolean onOptionsItemSelected(MenuItem item) { int id = item.getItemId();
if(id == R.id.action_discard){ finish();
}
return super.onOptionsItemSelected(item);
}
}
```

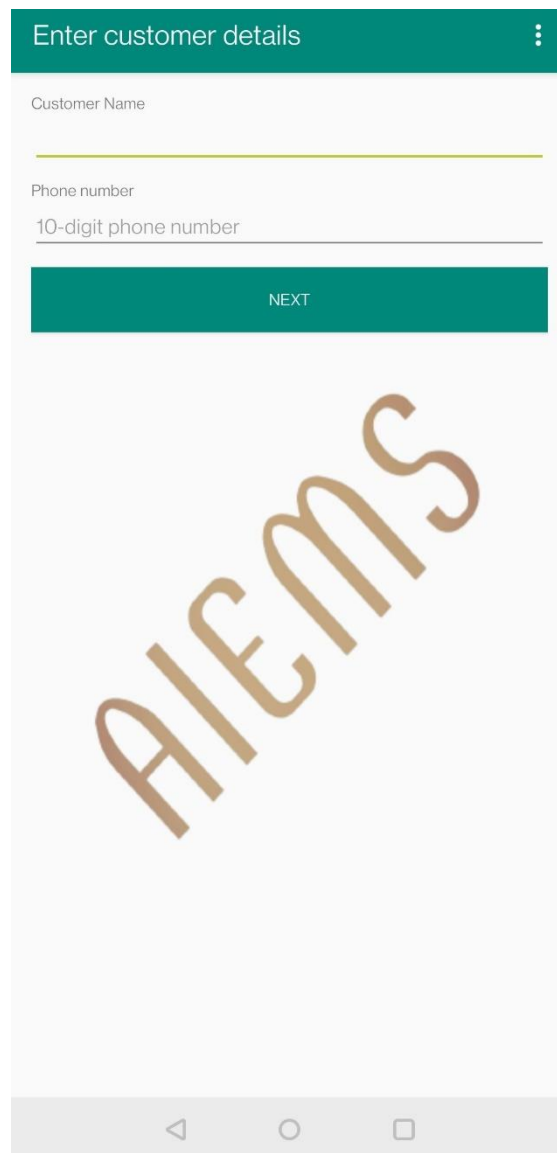
CHAPTER 5**RESULT AND DISCUSSION****5.1 Snapshots**

Snapshots is nothing but informal photograph taken quickly, typically with a small handheld camera. In other words diffened as an informal photograph that is taken quickly a quick view or a small amount of information that tells you a little about what someone or something is like The complete working of the Simulation of Train Depot have been picturized using OpenGL program. And the outcomes are depicted using snapshots. These snapshots sequentially describe all the phases included in the code.



Fig. 5.1 GST billing Application Logo

The fig shows the application logo which shows when the run is succeeded and the application is installed into the android virtual device. When the user clicks on application icon, application is started.



Enter customer details

Customer Name

Phone number

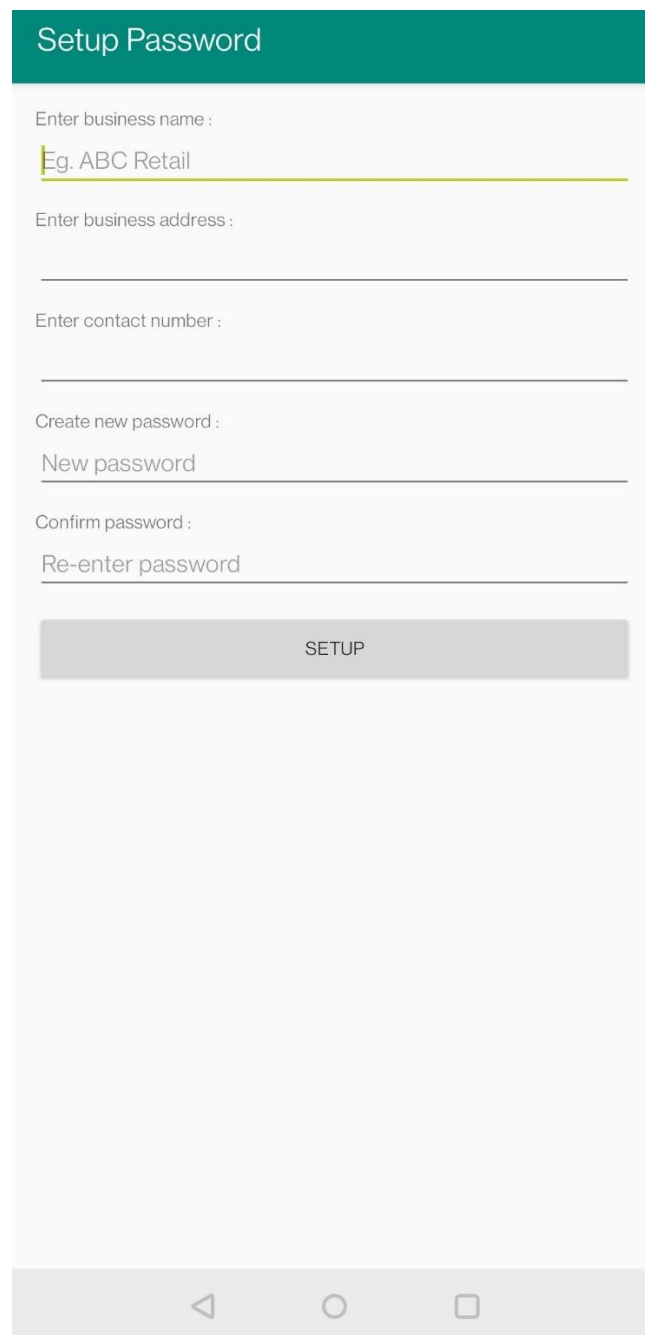
10-digit phone number

NEXT

ALEMS

Fig 5.2 Enter Customer Details

This is the intro layout window or screen which is displayed when the application is started. Here the user has to enter customer details like name and contact details.



The image shows a mobile application screen titled "Setup Password" in a teal header. Below the header, there are five input fields with labels: "Enter business name :", "Enter business address :", "Enter contact number :", "Create new password :", and "Confirm password :". The first field contains the text "Eg. ABC Retail" and has a yellow underline. The second, third, and fourth fields have grey underlines. The fifth field has a grey underline. Below these fields is a grey button labeled "SETUP". At the bottom of the screen is a grey bar with three white icons: a triangle, a circle, and a square.

Fig 5.3 Set Password

Here, admin or authority of the sales organization can add his business name, address, contact number and password credentials. When setup is clicked, records are stored into database.

Vishwas

S No	Price	Qty	Rate	Taxable Value	Tax Slab	CGST	SGST
	Laptop						
1	50000.00	20	42372.88	847457.56	18%	76271.19	76271.19

Total Amount Before Tax

₹ 847457.56

Add: CGST

₹ 76271.19

Add: SGST

₹ 76271.19

Total Tax Amount: GST

₹ 152542.38

Total Amount After Tax

₹ 1000000.00

Rupees. Ten Lakh only.

Fig 5.4 Customer purchase details

The price details like MRP, tax amount, CGST, SGST, GST are allotted to the customer as per his purchases. And total price amount is calculated and are displayed at the bottom of the layout.

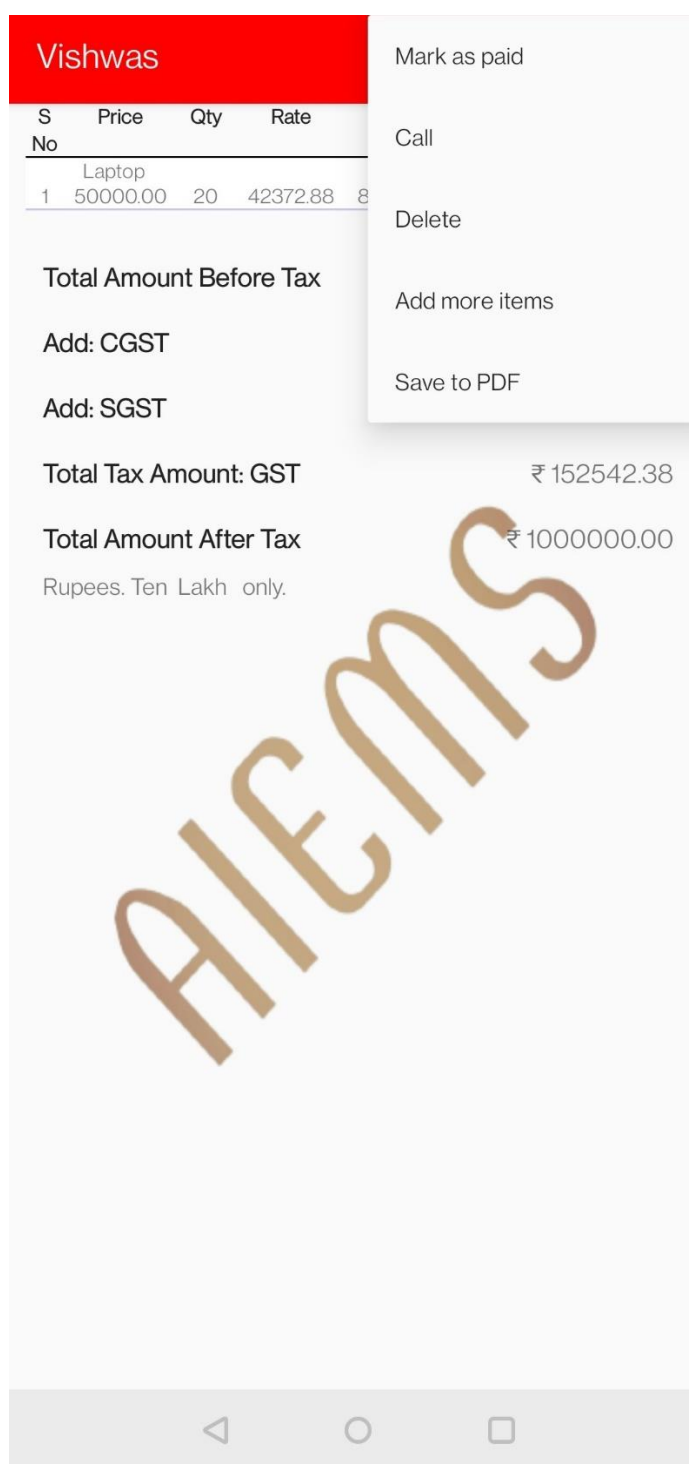


Fig. 5.5 Mark as paid

When the customer agrees to purchase the product in respective sales organization, admin can mark that payment has done by clicking the three menu button and 'Mark as paid' button.

CHAPTER 6**CONCLUSION AND FUTURE ENHANCEMENTS**

In this system we implement the automatic GST report generation software for purchase and sales. We develop a system which calculates the GST reports and also generate excel sheets of the reports which needs to submit to the government. To do manual calculation is a difficult task so we design a system which will reduce the manual work as well as save the time and generate reports efficiently. It is designed to replace an existing manual record system for reducing time taken for calculations and for storing data. The system is strong to handle daily operations where the database is cleared over certain time. This will reduce manual work, calculations and will also provide periodic reports any time.

The future system can be designed with more filter facilities such as supplier wise GST Billing. Integrate Bank transaction details with the application. Managing Credit and Debit details like mini accounts. The application will be enhanced into mobile application. GST Wise Report will be displayed in the form of chart layout. Auditor can view the company GST bill details in their mobile application itself.

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