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

2021-2022

submitted by

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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

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BENGALURU

CERTIFICATE

This is to certify that the mini project report entitled **"GST-Billing Application"** is a bonafide work carried out by

Mr. Jayatheertha S G **[1AR19CS018],**

Mr. 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 Signature of HOD

Mr. Ramesh Babu N **Dr. M S Patel**
Associate Professor, Professor & Head,
Dept. of CSE Dept. of CSE
AIEMS AIEMS

External

Examiner Name **Signature**

1. **_____** **_____**

2. **_____** **_____**

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The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of the people who made it possible, whose constant guidance and encouragement crowned my effort with success.

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Mr. JAYATHEERTHA S G   **Mr. VISHWAS GOWDA H V**

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DECLARATION

We, **Mr. JAYATHEERTHA S G [1AR19CS018]** and **Mr. 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:

Mr. JAYATHEERTHA S G   **Mr. VISHWAS GOWDA H V**

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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.

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CHAPTER 1
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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 helpsyou 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 suchas 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 ableto 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 June27, 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.
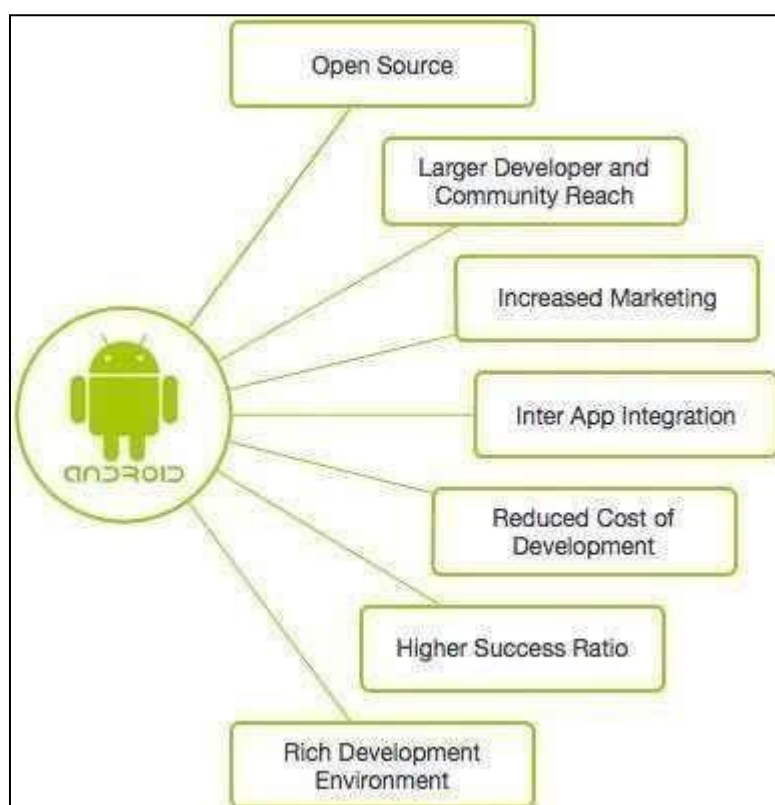
1.1.2 Why Android?

Figure 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 App store.

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. Everyday 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 telephonyor 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 ofnative 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 currentprocess with the use of technology and software. With increased number of orders, it becomesdifficult 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, aproduct etc. From this analysis, it is not uncommon to discover there is actually nothing wrongwith 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 modificationsas 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 uses 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 toknow 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, Quantityand GST percentage. We have options such

as mark as paid, calls, delete, add more items etc.

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CHAPTER 2

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HARDWARE AND SOFTWARE REQUIREMENTS

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

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

2.1 Functional Requirements

In software engineering and system engineering, a functional requirement defines functions of a system. Billing system is the process by which a business bills and invoices customers. Billing systems often include payment software that automates the process of collecting payments, sending out recurring invoices, expense tracking, and invoice tracking.

2.2 Non-Functional Requirements

In systems engineering and requirements engineering, a non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviour's. They are contrasted with functional requirements that define specific behaviour or functions.

- The user must get a great experience while calculating GST.

- Manual calculations are more time consuming.

- The application must be strong to withstand the large numbers on the system so that it does not crash or stop, and the system response must be fast and download user data quickly.

- The app must be accessible for all user segments.

- It saves time and reduces the chances of manual errors while computing the cost ofgoods and services.

2.3 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 (ADT)
- Android studio (2021.2.1 Windows 64-bit)
- XML
- Java development tool kit (JDK)
- Software development kit (SDK)

2.4 Hardware Requirements

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

- Processor: Intel Pentium 41.50 Giga HZ
- Memory: 512MB to 1GB
- Operating System: windows 9/10/11
- RAM: 4/8GB

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 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
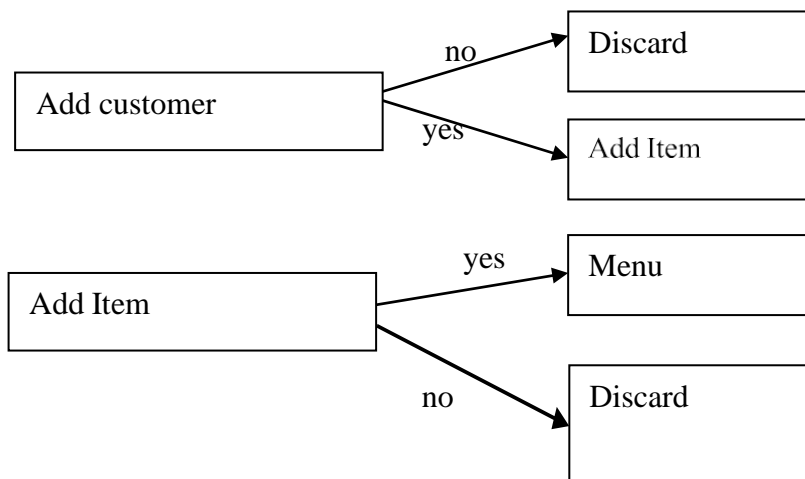

Figure 3.1: System Design

3.2 Flow Chart

A flow chart is a diagrammatic representation of an algorithm, a step-by-step approach tosolving a task. The flowchart shows the steps as boxes of various kinds and their order byconverting the boxes with an arrow.
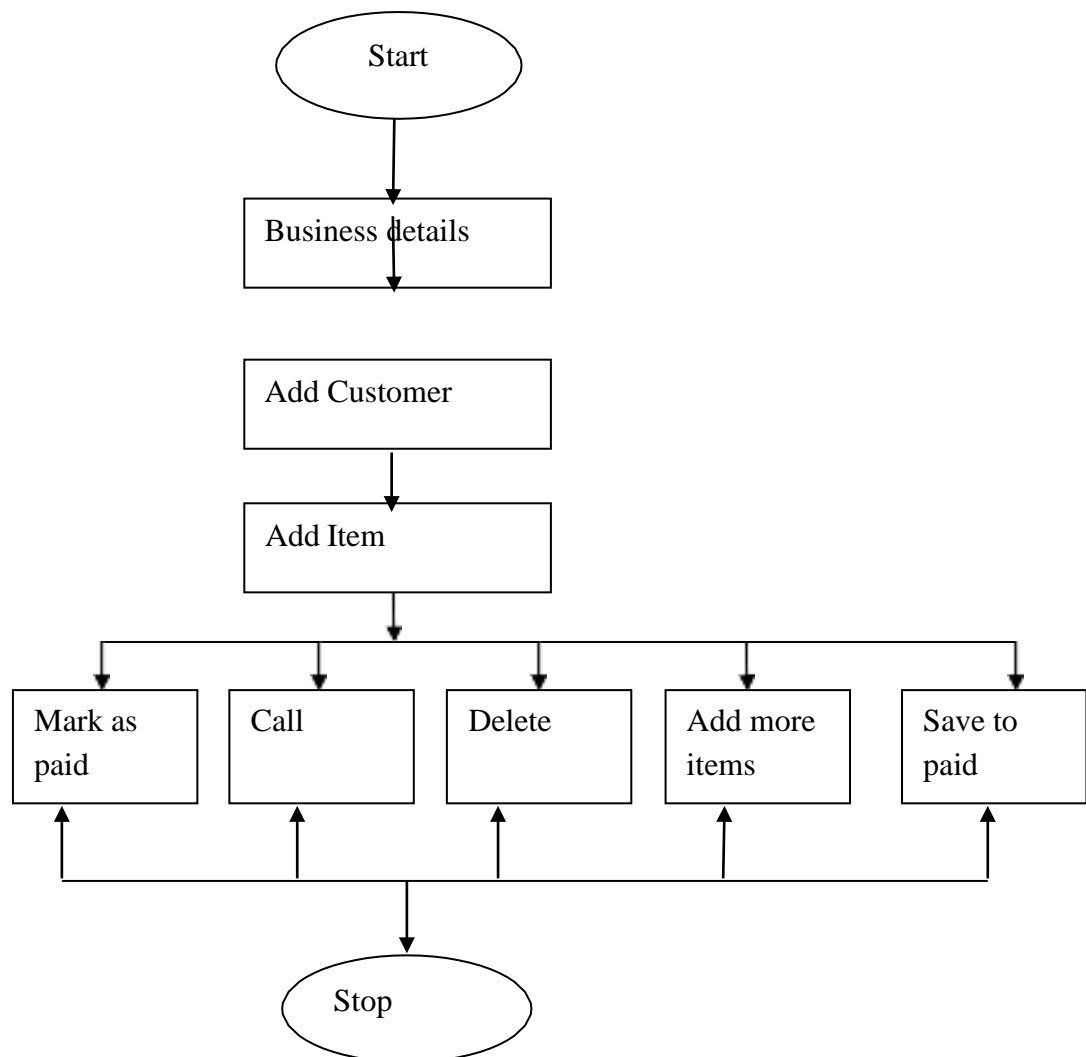
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Figure 3.2: Flow chart

3.3   Use Case Diagram

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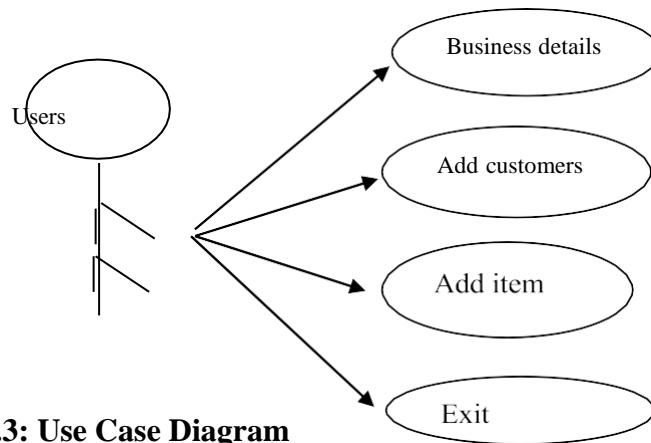

Figure 3.3: Use Case Diagram

3.4   User Interface

Figure 3.4: Set Password

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

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CHAPTER 4
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IMPLEMENTION

Project implementation is the segment wherein visions and plans come to be a reality. Thisis the logical conclusion, after evaluating, deciding, visioning, planning, applying for finances, and finding the monetary resources of a challenge. The implementation degree ofthe 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 implementedsuccessfully 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 Windowsfamily 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 yearof 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 tohave as few implementation dependencies as possible. It is a general- purpose programminglanguage 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

In implementation we implement code for GST-E-BILLING Android Application. Here we are using 15 activities to build our apk. Each activity contains one xml and one java file. Here are some files

1. BillsActivity.java
2. NewBillActivity.java

BillsActivity.java

    Here we created a new project using an empty activity as our starting point, once that's ready head over to codes. Here we have used linear layout as a layout. In this activity We can add the new customer details and we can see the paid and unpaid bills.

```
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;

importcom.taneja.ajay.gstbillig.data.GSTBillingContract;

public class BillsActivity extends AppCompatActivity implements
```

```java
LoaderManager.LoaderCallbacks<Cursor>,

BillAdapter.BillItemClickListener {

Private RecyclerViewunpaid 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() {
```

```java
@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){

Intentintent=newIntent(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);

}

}

NewBillActivity.java

Here we created a new project using an empty activity as our starting point, once that's ready head over to codes. Here we have used linear layout as a layout. In this activity We can add the item, selling price, quantity and tax percentage.

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.ArrayAdapter; 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

CRIPTION);

float finalPriceValue =
editIntent.getFloatExtra(GSTBillingCustomerEntry.SECONDARY_COLUMN_FINAL_PRI
CE, 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,

```java
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.get

StringExtra(DetailActivity.EDITING_ITEM)).build(),contentValues,


GSTBillingContract.GSTBillingEntry._ID+"="+editIntent.getStringExtra(DetailActivity.EDIT

ING_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);
```

```java
taxSlabSpinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener()

{

@Override

public void onItemSelected(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.buil dUpon().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.buil

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);

}

}

<div align="right">

CHAPTER 5

</div>

<div align="center">

RESULT AND DISCUSSION

</div>

5.1 Snapshots

Snapshots is nothing but informal photograph taken quickly, typically with a small handheld camera. In other words defined 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 likeThe complete working of the GST Billing Application have been picturized. And the outcomes are depicted using snapshots. These snapshots sequentially describe all the phases included in the code.

<div align="center">

Figure 5.1: GST billing Application Logo

</div>

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.
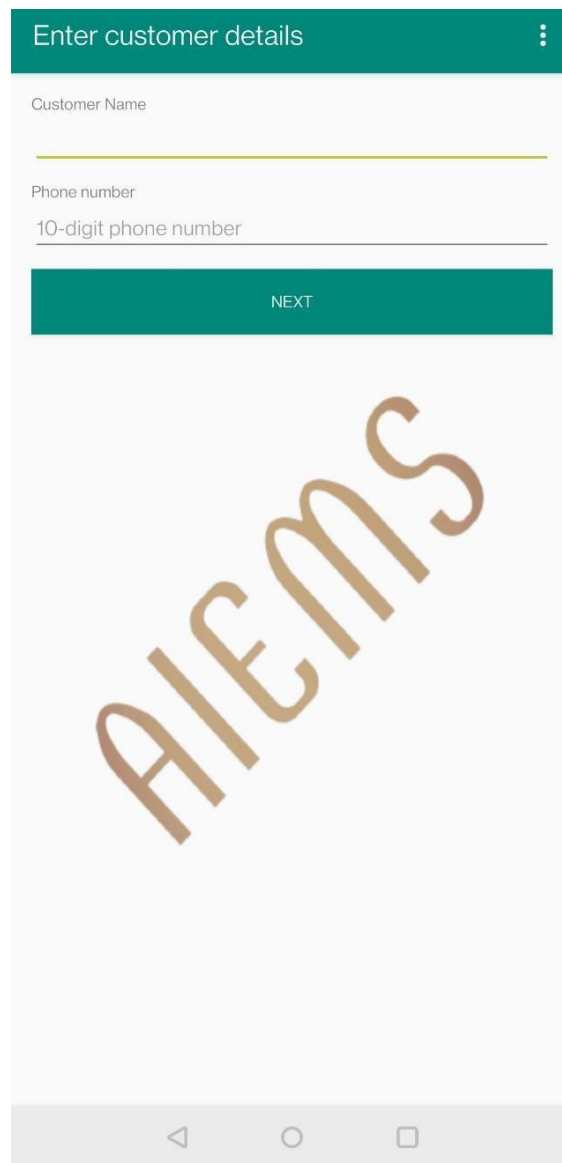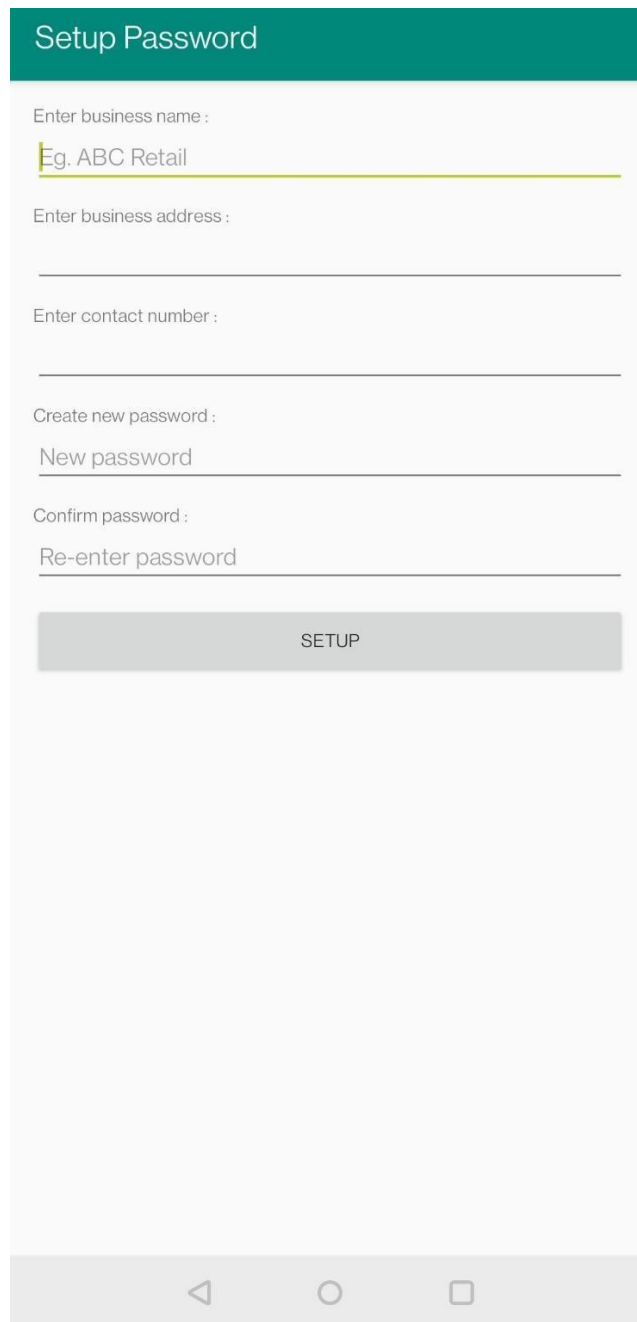
Figure 5.2: Enter Customer Details

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.

Figure 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.

Figure 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 displayedat the bottom of the layout.
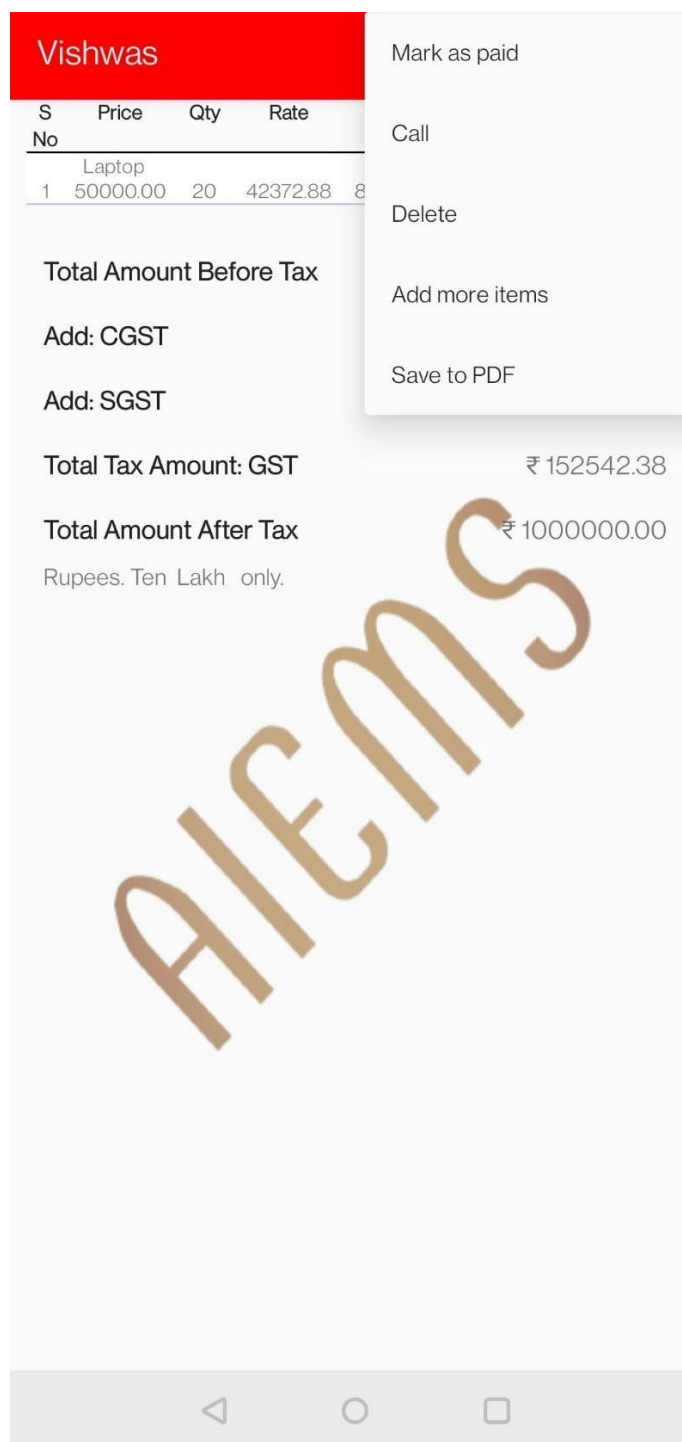
Figure 5.5: Mark as paid

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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