A Proposed GST Ready Mobile Invoicing Application

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Abstract- *Remote patient monitoring (RPM), also called homecare Goods and Service Tax (GST) is an indirect tax applicable throughout India which replaced multiple cascading taxes levied by the central and state governments. GST is applied on goods and services at the place where final/actual consumption happens. Under GST invoicing rules and formats have been notified covering details such as supplier's name, shipping and billing address, HSN code, place of supply, GST rate. Raising and tracking in invoices is an integral part of any organization that takes the services of another organization [5]. Above mentioned android application includes features like staying updated about the statuses of all the raised invoices. In additional to invoices, this application maintains records for quotes and vendor information. Mobile invoicing also includes features that are, printing on Bluetooth printer, Generation of report. The app is supported by Web Application which involves maintaining inventory details, sending summary to customer by SMS, email invoice to customers and send MIS of sales to customer.*

Keywords- GST, invoicing, payment, Bluetooth printer.

I. INTRODUCTION

Goods and Services Tax (GST) would be a very important step in the field of indirect tax reforms in India. By merging a large number of Central and State taxes into a single tax. There are three types of GST i.e.for sale within the state revenue will be shared equally between the center and the state (i.e. CGST+SGST) and for sale to another state there will only be one type of tax (central) in case of inter-state sales (i.e. IGST). From the customer point of view, the biggest advantage would be in terms of a reduction in the overall tax burden on goods, which is currently estimated to be around 25%-30%.

Major challenges for businessmen is to generate invoices for customers. According to our empirical study, more than thousands products comes under GST. It will be more difficult to calculate GST for different products [6]. Primary objective of theproduct generated is to provide accurate GST calculations for different product automatically and print an invoice for the same from an android phone through Bluetooth Printer. This android application is supported by Web Application which is including details of GST required for calculations.

Benefits of this product:

How ready to use GST invoice templates-

This product generates right invoices for our clients usingready made GST invoice template. We can generate reports of invoices in GST compatible format, in just a few clicks. We can Print the invoice on Wireless Printer.

Control your financial data-

It will be much easier to keep track of all the invoices sent and manage all the payments of our clients. Filing reports also gets much easier with this integrated system and will save time.

Get paid faster-

Keep track of payments with specialized reports.

No more errors-

You can avoid any errors by easily applying CGST, SGST and IGST for every invoice in just few clicks.

Section I contains Introduction. Section II containsthe related work which includes problem statement, objectives, etc., Section III containsproject's methodology, Section IV describes results and discussion, sectionV concludes research work with future scope.

This Project deals with the design and implementation of android application with automatic creation of invoices including complete description of inventory products and GST tax. The Application has wide range of purpose like MIS reports of selling, Maintaining accounts, wireless printing (Bluetooth) of invoice.

Functional Objectives

- Lets you send professional invoices.
- Send your invoice by mail.
- Automate billing.

- Generate Selling reports and allow sending summary to the customers via SMS.

A. Performance Objectives:

Performance is not an issue because all of our server queries involve small pieces of data. Changing screens requires very little computation and thus occurs very quickly.

Data updates only takes a few second. The invoice calculation in this application is highly efficient, taking only a fraction of a second to compute.

II. RELATED WORK

The author Lourdunathan F and Xavier P describes background, Prospectus and challenges in Implementation of Goods and services Tax (GST) in India [1].

The author Akanksha Khurana and Aastha Sharma talked about various benefits and opportunities of GST [2].

The author Santosh M. Herur, Vinayak P. Miskin describes the wireless thermal printer and develop an android application so as to implement Bluetooth thermal printing from real-time android mobile phone. By using the android application we calculate and generate invoice for customers and take a print by using Bluetooth thermal printer [3].
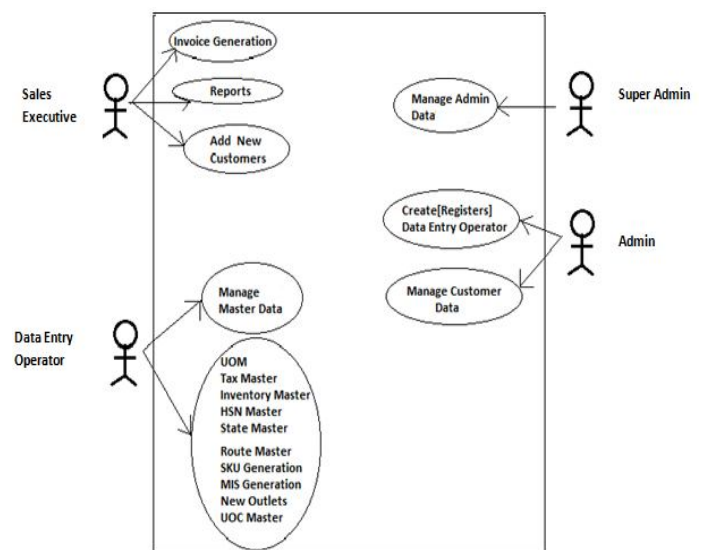
III. METHODOLOGY

The first stage was getting everyone in the group acclimated to the new development platform. We have done this by finding and sharing resources (documentation, sample code, etc.), as well as running through the set-up process for the Android SDK as a group. Before beginning development, we had established documentation guidelines and testing frameworks in order to enhance maintainability and prevent bugs in the long run.

Next, we had worked up specifications, established deadlines, defined roles, and allocated tasks to each group member. We planed on dividing up the development process into two central phases, core development and feature development. Core development involved implementing the essential aspects of our application, whereas feature development encompasses any additions which extend the app's capabilities. We had implemented these additional features in order of priority (which we had established before beginning development).

The GST ready mobile invoicing application product is a new, single instance product intended for use on the Android platform. In GST ready mobile invoicing application main focus on User Master which is responsible for database and synchronization services. The scope of the project encompasses both user and customer functionalities, so both aspects are covered in this product. The product also illustrates the interactions between the user management and customer master, basically it maintains the sales record like inventory, invoice & accounts (i.e. receipt & payment) of goods sold to the customer.

USECASE DIAGRAM

CORE FEATURES OF DESKTOP APPLICATION.

User Management:

Considering this GST Desktop application there are three types of users involved in the Web Application. They are as follows:

Types of user:

Super Admin (i.e. the developer's admin):

Super admin is developer's admin. It is mentioned in code. Supper admin is a user who can recover this system. This user is responsible to handle the registration of the Admin and also manages the Admin user (i.e. Activation and Deactivation of the admin)

Admin (User admin/client):

Users with this role will manage registration of DEO master and Sales Executive. He will be responsible for maintaining the entire application along with maintaining database which includes data related to customers, resource, password-related operations, etc. He can create, delete and update the organization related data.

Data Entry Operator:

The Data Entry Operator is responsible for entering the data for all the master pages. DEO is also having rights to delete and update the data in this application. In some scenario DEO will be not able to delete the records, in such cases admin will have the rights to do so.

The new outlet will be created by him. DEO will synchronize the Invoices created by Sales person and generate further reports.

Customer Master:

We have added the software user's information/data inour Master Database.

Customer master details contains following information:

 Business name
 Contact
 Email address
 Address
Type of Business: i.e. partnership, etc.
 Bank Details
 Admin
 Password

State Master:

In this table there are two columns State name and there corresponding state codes declared by the government.

This codes may be changed after some instance of time, so the edit, delete and update options are provided

Inventory Master:

The inventory master contains all the information regarding products of the trading companies. All the required information of the product will be retrieved from all other master pages like UOM Master, UQC Master, Tax Master, etc.

Tax Master:

Tax master will contain Tax type that we are going to apply for the product (i.e. GST).

GST Tax Role:
There are three types of GST.

 CGST: The GST levied on the intra-state supply of goods or services by the Center is Central GST (CGST).

 SGST: The GST levied on the intra-state supply of goods or services by the States is State GST (SGST).

 IGST: The GST levied on the inter-state supply of goods or services and collected by the Center is Integrated GST (IGST). For sale within the state revenue will be shared equally between the centre and the state (i.e. CGST+SGST).For sale to another state there will only be one type of tax (central) in case of inter-state sales. The revenue will be shared based on destination of goods.

HSN Master:

HSN (Harmonized System of Nomenclature) code is an unique id assigned for each product category by the Government. This code is similar all over the world, thus even if the name of the products changes as per state the product will be recognized easily with the help of HSN code[4].

There is fix GST Tax assigned to each HSN code. Thus that particular tax will be levied on the respective product.

Tax and HSN code assigned to the product may be changed in future so this information is editable and can also be updated and deleted.

UOM Master:

Unit of Measurement are measuring units that are assigned to the products as per the requirement i.e. for oil we use Unit of Measurement as Litter, for grains we use grams or kilograms, etc.

In inventory master UOM field is retrieved from this table.

e.g.

Product	Oty	UOM	Price	Amount
Parle-G (100gm)	2	No.	10	20
Oil Loose	1	ltr	60	60
Potato	1	kg	20	20

Inventory Master contains two fields called:

UOM which is depended on the SKU (Stock Keeping Unit) of the product.

Volume UOM which is depended on the selling quantity of the product

UQC Master:

Government had given some standard short forms for UOM (Unit Of Measurement) that are called UQC's (Unit Quantity Code).

e.g. GRAMS-GMS, PIECES-PCS, etc.
CORE FEATURES OF ANDROID APPLICATION.

User Management:

Considering this GST Android application there is only one user involved in the Android Application (i.e. Sales Executive).

Sales Executive:

Sales executive will generate invoice on mobile devices by adding client's information, shipping address and selecting the ordered products from the inventory details field in database.
The invoice is then printed via Bluetooth printer and saved as a PDF file so that later it can be mailed to that particular customer.

Sales Executive also maintains the weekly, monthly and yearly records.

RESULT AND DISCUSSION

Web Application's Input and Output :

Role of Super Admin:

Admin Registration:

Admin Details should be entered through the Admin Registration Page and the Admin will be allowed access to there roles by checking his login details are valid or not.

Admin Management:

Super Admin manages the Admin activation and deactivation by just clicking on activate and deactivate button in front of particular admin.

Role of Admin:

Organization Details:

Admin adds his organization details required while generating the invoice over here and click on next button to add further organization bank details.

Organization Bank Details:

Unique Bank Account Details should be added through the footer and click add new button to add the record and then click next to go to next page.

DEO (Data Entry Operator) Registration:

DEO will Register and will Login using this authentication details. Admin will check for authentication details and allow access to DEO if the details are valid.

Email Invoice:

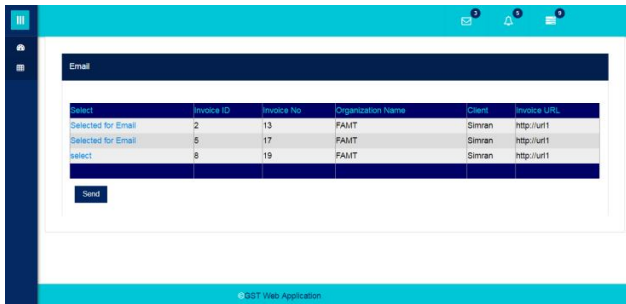Steps to mail Invoice to particular customer:

Step 1:
Search the customer by organization details.
Step 2:
Click the Select button in front of the customer searched. Then the invoices of that customer will be displayed.
Step 3:

Select the invoice to be send and click the Send button to send the invoice URL to through which the customer can view the invoice.

Update organization details:

      Admin can update the organization details. By clicking the radio button to view that particular information.

Role DEO:
DEO will enter the data of all following master pages:
HSN Master:
SKU Master:
Tax Master:
State Master:
UOM Master:
UQC Master:
Inventory Master:

      Required information for Inventory Master is retrieved from all above mentioned masters. Only the price of an inventory item is entered manually

Android Application's Input and Output:
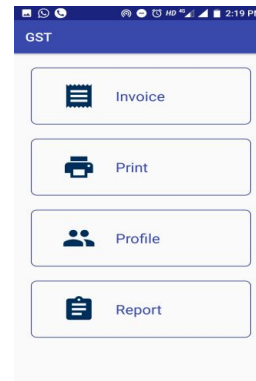
Steps to generate invoice:

Step 1:
Sales Executive can register buy clicking on Create one and create new account and then login through this page. If he fails to remember the password then he can click on Forget

Password to get the password via mail. If the login details are valid he will get access to generate invoices.
Step 2:
He can select any of the following options to perform that particular action:

Invoice

      When you click in invoice option following page will be displayed to enter the required information to generate invoice.

      After Entering above details click on right arrow to add items ordered.

      After adding items click on right arrow to add payment details .

      After adding Payment details click on right arrow to generate invoice. Then we can save, send and print the generate invoice.

Print:

      When we select a print option following page will be displayed and we can select the invoice we want to print.
Profile:

Sales Executive can edit his information by selecting Profile option.

Report:

We can generate invoice report by clicking on report option and adding starting date and ending date of those invoices of which we want to generate a report.

IV. CONCLUSION AND FUTURE SCOPE

There have been many news, discussions, and blogs posting regarding GST. As the concept of GST was recently introduced, not much review papers are published, as still only few effective applications have been implemented. This paper will help realize end users that how this application is simple and no special efforts are required to learn how to use this application. Users will also realize the need of this application so as to reduce the paper work and manual calculations of tax rate and hence, reduce the stress.

V. ACKNOWLEDGMENT

REFERENCES

[1] Lourdunathan F and Xavier P 2017 A study on implementation of goods and services tax (GST) in India: Prospectus and challenges.

[2] Akanksha Khurana and Aastha Sharma. 2016. GOODS AND SERVICES TAX IN INDIA - A POSITIVE REFORM FOR INDIRECT TAX SYSTEM

[3] Santosh M. Herur, Vinayak P. Miskin, L. L. 2012. EFFICIENT WIRELESS THERMAL PRINTING FROM ANDROID APPLICATION.

[4] http://howtoexportimport.com/Meaning-of-HSN-Code-4768.aspx

[5] https://www.relakhs.com/gst-goods-services-tax-in-india

[6] https://www.gstindia.com/goods-and-service-tax-a-detailed-explanation-with-examples-2/