

A web application for E-Invoicing System

Sumukh P Bharadwaj ¹, Prof. Pavithra B²

¹Master of Computer Application, Dayananda Sagar College of Engineering

²Master of Computer Application, Dayananda Sagar College of Engineering

ABSTRACT: This document shows the researched information about the **E-Invoicing system** which is developed for the organization and which will be used within the organization to accomplish the needs of the organization. This paper will also have complete information about the different software used to develop the application. The paper will have information about Microsoft SharePoint, Microsoft Power Platforms like Microsoft PowerApps, Microsoft Power Automate e, etc. In the end, the document will compare traditional invoicing and e-invoicing systems.

Key Words: Invoice, Traditional invoicing, Flow, Automation, Power Automate, Microsoft PowerApps, SharePoint list, SharePoint.

INTRODUCTION:

E-Invoicing is an application developed using Microsoft software tools like PowerApps, power automate and a SharePoint list which acts like a database used to store all the invoice details of the org organization invoice tracker is designed to automate the account receivable process. In this application, the data will be collected through excel soft excel sheet. In this application, the user interface is been developed by Microsoft PowerApps. Microsoft PowerApps is a software developing tool that is used to design the user interface for the application. The power automate tool of Microsoft is used to automate the task for the user, for example sending email to the user or sending daily reminders for the user. It will do the task automatically for the user according to his requirements or his needs. In this application, SharePoint will act as database storage where all the data related to the invoice tracker will be stored. SharePoint is just like Ma MySQL database table which consists of rows and columns.

MICROSOFT SOFTWARES USED:

1. Microsoft PowerApps:

Microsoft PowerApps is a powerful tool developed by Microsoft which will help the developers to design the custom applications for the web applications for the users. It is very easy to learn software since it deals with drag and drop concepts with fewer coding practices. PowerApps can be used for multiple processes involving workflow, automation, data visualization, reporting collaboration, and more. Apps can be accessed via mobile devices or web browsers.

* Why Microsoft PowerApps?

Since PowerApps follow low code no coding rule, it is very easy to understand the technology and even non-technical can also learn and try to develop custom applications easily. It aims in minimizing the code practice and will help the developers to design the application in a short amount of time. PowerApps will be having various connections to various Microsoft applications like SQL server, one drive in office 365, Google Docs, SharePoint, SAP, and Oracle.

*Main objective of PowerApps:

The main objective of PowerApps is to deliver the custom application to the end-user on time, as well as enable business users to build new capabilities via apps, without the complete knowledge of coding and its functions. Any custom application can be developed within time by using PowerApps since the designing of the user interface can be done by just drag and dropping and just assigning the function to that particular field or button. Below is just a sample photo just to get a visual look of the application getting developed through PowerApps.

2. Microsoft Power Automate:

Microsoft power automation was known as **flow** until November 2019. It is a software developed by Microsoft for the automation of recurring tasks. It is also the part of Microsoft power platform line of products together with products such as power apps and power BI. Power automate was formally released in October 2016.

* Use of Power Automate:

Power automation in s software developed by Microsoft to organize the workflow of a particular application within the organization. It is a service that helps us to create automated workflows between favorite applications and services to synchronize files, collect data, get notifications, and more. It is mainly a public cloud service to help individuals and teams to set up automated workflows. Power automation is a tool that can be handled even by a non-technical person also.

* Types of flows in power automate:

a. Schedule Flow: Schedule flow is exactly what the name sounds like. The schedule flow will run on daily bases or the date and time set by the user. This type of flow is very useful in sending notifications to the person to the team accordingly on daily bases. This feature will help in daily updates to the user by sending notifications or email to the person. This type

of workflow can be used on daily remainders or can also be set to a particular day and time so that he/she won't miss out on any of the important tasks or events.

b. Automated Flow: Automated flow is a type of flow that is used in certain conditions, if the conditions match then it triggers the flow. All the automated flows start with a "when" condition. If the condition satisfies then automatically the flow will start. An automated flow is recommended when we want a flow to run whenever specific conditions meter depending on which type of automated flow trigger, we choose.

Example: If we want to trigger a flow whenever an item is created in a SharePoint list then we use the "when an item is created" condition for starting the workflow. We should connect the source for the flow to start or give the name of the list in SharePoint to the flow to get triggered. So, once a new item is added to the list the flow will automatically start.

c. Instant Flow: Instant flow is the most common type of flow used compared to other types of flows. It is widely used when building power app applications since most of the time it is required to complete some complex tasks. The instant flows will come to action whenever the action will be done from the power apps that is whenever the item is created in SharePoint PowerApps the flow will be triggered instantly after the application is accessed.

Example: If we want to create a PowerApps application to act after the user clicks a button, here is where the power apps trigger is actioned.

c. UI Flow: The UI flow is very new to the workflows group. It is a Robotic Process Automation (RPA). It usually works by recording our actions for an application and then playing it for other users. There are two types of UI flows they are:

- * Web App

- * Desktop App

The only difference between them is that the web app and desktop app is that the web app runs on Microsoft Edge and the desktop app runs on Windows desktop. The UI flow is best suited for automating repetitive tasks for basic applications.

d. Business Process Flow: The business flow is also new to the workflow group. This flow always ensures data consistency throughout the complete process. The business process flow ensures that people enter data continuously and follow the same steps every time they work with a customer by creating a business process flow to handle customer service requests. It provides a guide for people to complete the work. It provides a streamlined user experience that leads people through the process their organization has defined. With business process flow we define a set of steps and stages that are displayed in a control at the top of the form.

* Microsoft SharePoint:

Microsoft SharePoint is a web-based application that performs many functions within the organization or for the organization. SharePoint-based management system is used in almost all organizations to ensure the inner functionality of the workstation. So, SharePoint is basic as a database management system for the organization where the user can store, retrieve, delete, or can also add a new set of data items to SharePoint. Using SharePoint as back storage the e-data will be easily accessible from PowerApps and power automated by providing the data source from the SharePoint list.

* OVERVIEW OF E-INVOICING:

The invoicing is an invoice generator application used within the organization to keep track of the is done so that there won't be any payments due or pending for the organization. The working of the project is simple and straight. The application allows the user to generate the invoice whenever there is a new payment made within the organization. The application will fetch some of the data regarding an invoice from Microsoft excel. This application is been developed completely using Microsoft power platform software and Microsoft SharePoint. Since is been developed using Microsoft software the data transfer is very flexible. The user interface of the invoice is developed using PowerApps, it allows for dd multiple functions at the same time. The data which is submitted using the invoice application will get stored in the Microsoft SharePoint list. These data will be accessible only by the administrator. The rest of the work will be taken off from automation. Once the invoice is generated the notifications to the managers will be sent through the workflow of the project. Once the invoice is generated the admin will get notified through email that a new invoice is generated with the invoice number. The invoice number is also auto-generated from power automate.

* Role of PowerApps in E-Invoice:

The main user interface of the invoice application is designed with the help of power apps. It allows the user to develop a custom application according to his requirements. Compared to other designs to PowerApps is the easiest tool for development. Since PowerApps follow low code coding modern rules, any complex applications can be developed in a short amount of time. It mainly uses drag and drops functionality so that less will be consumed. It allows the creation of applications as well as desktop applications.

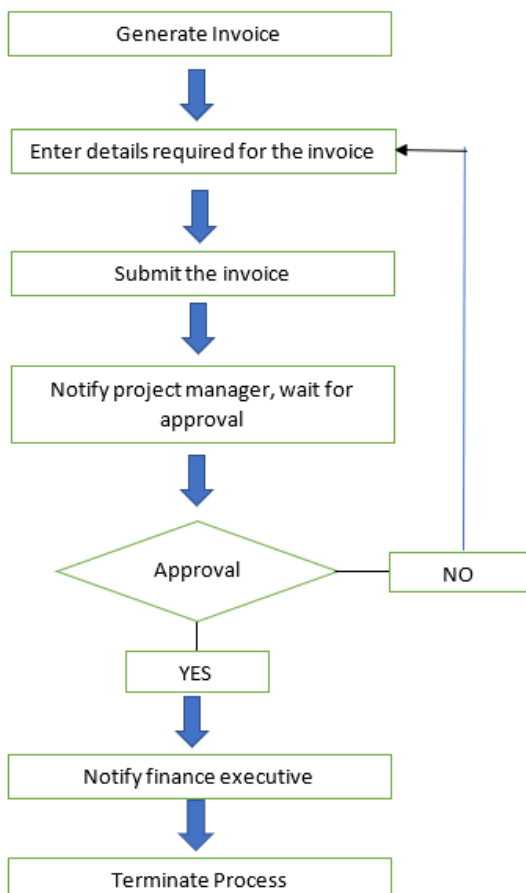
It will also allow the user to add functions like creating buttons, adding textbox, and adding forms so that various functions can be performed. The syntax of every function is very simple compared to other designing software.

Example: If we want to add a button to a screen that is used for submitting the data or used to navigate from one screen to another screen, then the syntax would be "Navigate (screen

name);". This function will navigate the user from one screen to another when the user clicks on the button.

* Working on E-Invoicing

In this section, the real work of the project is been discussed. The user will get the invoicing d data in a form excel sheet where some of the data like invoiced company, invoiced date, total amount, and the email address will be provided. The excel data will be connected the to SharePoint list with the help of power automation. This can be done by choosing excel for business function power automate. By providing the data source of the SharePoint list we can connect the data items from Excel to SharePoint. Once new invoice data is added to the excel sheet, the workflow will get triggered and the flow will start to work, once the flow stops, we can see the same data SharePoint list. From here the next step will start from PowerApps. Once all the invoice data is added from PowerApps the user will submit the data which will be stored in the SharePoint list. So, after the invoice is been submitted an automated flow will get triggered. This flow will send the notification in the form of an for the project manager and will wait for his approval for the invoice. Once the project manager will approve the invoice, the next notification will be sent to the finance executive and waits for approval. Once the finance executive approves the invoice an email will be stored to the customer with the link so that he will be able to pay the amount. Once the user pays the amount the flow will be terminated. If the user pays less amount then the flow will run again notifying the finance executive that the customer has entered less amount, and sends the link through email to pay the due amount.



* Problems faced in traditional invoicing

a. Time Consuming:

Since traditional invoicing is done manually by people, the time taken to generate one invoice will consume more time. This might also affect the business cycle of the organization and will also be difficult to keep traction along the transactions made in a day, month, or a particular year.

b. Expensive:

In traditional invoicing, the cost for producing an invoice will also come into the picture since the invoice will be generated physically. The cost of the paper or any other physical element will be added to the expenses.

c. Mistakes:

In the research made for the traditional choice, the study has shown that the number of mistakes is more while generating the invoice which will affect the profit or loss of an organization. The user may enter the wrong amount, or wrong invoiced date while generating the invoice.

d. Longer time for payment:

Since traditional invoicing is taken care of manually, the process to generate one invoice is more which will slow down the payment process, and sometimes will also get delayed. Sometimes payment won't be completed due to losing the original invoice copy.

e. No visibility and no tracking:

In manual invoicing it is difficult to keep track of the invoice whether the invoice has reached its destination or not. There is a lot pose of the ability of invoices getting lost or not delivered to the right address. Moreover, paper invoices are prone to wear and tear.

* Proposed solution for traditional invoicing:

To overcome the problems faced in traditional invoicing, a new concept was proposed called E-Invoicing where E stands for electronic invoicing. E-invoice is the exchange of invoices between the buyer and the supplier in an electronic format. Through e-invoicing, we can automate the process of generating invoices and delivering them over e-mails or any other medium.

By following an e-invoicing system it helps them in the following ways:

1. **Reduce invoicing cost:** Since e-invoicing is done electronically it will reduce the cost of paper or other physical mediums required to generate invoices.

2. **Ensuring invoice tracking:** Compared to traditional invoicing, the user can keep track of the invoice since it is generated electronically. The user can keep track of the invoice with the help of the invoice number which gets generated uniquely every time a new invoice is generated.

3. **Reduce the chance of errors:** In e-invoicing rate of error is very less compared to traditional invoicing. Here almost all the data related to invoices including the invoice number gets

generated automatically which results in a smaller number of errors.

4. Faster payments: Since e-invoicing can be sent through emails or any other source on the internet the payments can be done instantly with the help of the internet. Daily payments can be tracked easily and there won't be any transaction problems during the process.

CONCLUSION:

In modern times, traditional invoicing is outdated as the business goals and business needs expand gradually. Most other marketing companies have updated themselves from traditional invoices to e-invoicing since all are looking for flexibility and less time-consuming ways to accomplish their work. All the marketing companies are looking to automate the billing methods and invoice generating systems. This method will help them in reducing the risk of bad debts for the company.

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