Abstract--Mobile applications developed in less than two decades to achieve the status of the largest information repository in human history. By providing efficient, fast, consistent and authentic tools in the form of internet and mobile applications, information technology is penetrating human life and is playing an important role in changing lives of so many people around the globe. By default, they’re little more than a picture of our document—and if developer want to find info inside them, developer will have to open each one and read it for ourselves. Or, developer could let our device do the heavy lifting for us, by turning your image into text and letting us search through our scanned documents as easily as developer search through any other documents. That’s what OCR—Optical Character Recognition—does. It uses our computer’s smarts to recognize letter shapes in an image or scanned document, and turn them into digital text developer can copy and edit as needed.

Keyword:- OCR, cloud

I. INTRODUCTION

In the running world, there is growing demand for the software systems to recognize characters in computer system when information is scanned through paper documents as developer know that developer have number of newspapers and books which are in printed format related to different subjects. These days there is a huge demand in “storing the information available in these paper documents in to a computer storage disk and then later using this information by searching process”. One simple way to store information in these paper documents in to computer system is to first scan the documents and then store them as IMAGES. But to reuse this information it is very difficult to read the individual contents and searching the contents form these documents line-by-line and word-by-word. The reason for this difficulty is the font characteristics of the characters in paper documents are different to font of the characters in computer system. As a result, computer is unable to recognize the characters while reading them. This concept of storing the contents of paper documents in computer storage place and then reading and searching the content is called DOCUMENT PROCESSING. Sometimes in this document processing developer need to process the information that is related to languages other than the English in the world.

For this processing document developer need a software system called CHARACTER RECOGNITION SYSTEM. This process is also called DOCUMENT IMAGE ANALYSIS (DIA).

II. LITERATURE SURVEY

The fourth generation can be characterized by the OCR of complex documents intermixing with text, graphics, tables and mathematical symbols, unconstrained handwritten characters, color documents, low-quality noisy documents, etc. Among the commercial products, postal address readers, and reading aids for the blind are available in the market.

Nowadays, there is much motivation to provide computerized document analysis systems. OCR contributes to this progress by providing techniques to convert large volumes of data automatically. A large number of papers and patents advertise recognition rates as high as 99.99%; this gives the impression that automation problems seem to have been solved. Although OCR is widely used presently, its accuracy today is still far from that of a seven-year-old child, let alone a moderately skilled typist. Failure of some real applications show that performance problems still exist on composite and degraded documents (i.e., noisy characters, tilt, mixing of fonts, etc.) and that there is still room for progress.

There are various apps that perform OCR functions and these applications pose the main functionalities of the Optical Character Recognition Technology.

- PDF Scanner: Document Scan released on 24 Jan 2014: One of the most popular OCR apps, which continues to receive rave reviews for its easy to use functionality is the ‘PDF Scanner Document Scan+ OCR’. Available for android users, the app imports images as well as PDF files.

- Microsoft Office Lens released on 26 May 2015: Developed by Microsoft, Office Lens is another mobile based OCR. Its main purpose is to digitize notes on whiteboards or blackboards. It can also make digital copies of your printed documents, business cards, or posters and trim them, its popularity stems from its ability to enhance and optimize images captured, automatically scaling images to size. Office Lens is available to download from the App Store and Google Play.
• **Adobe Scan** developed by Adobe released in 2017 easily capture forms, notes, and multi-page reports. Go beyond scanning documents to scanning receipts, business cards — even whiteboard discussions. Powered by Adobe Sensei, Adobe Scan automatically detects borders, removes shadows, and converts printed text to digital in seconds.

• **Google Docs** with an inbuilt OCR their Google Drive functionality. For those already familiar with Google Documents, you may want to use the OCR built into Google Drive. For the best results the documents font should be set to Arial or Times New Roman. You can further improve result by making sure the image scanned has even lighting and clear contrast between color.

• **CamScanner** released in 2010 just use your phone camera to scan and digitize all kinds of paper documents: receipts, notes, invoices, whiteboard discussions, business cards, certificates, etc.

**Comparison with another application**

**Existing System:**

In the existing system of OCR applications the applications can perform the following functions.

1. It can scan an image of a document taken directly from camera.
2. After scanning it, the image is converted into a pdf format so that it can be used as a document.
3. And then the document is shared using others services.

*The major problem that is faced in the existing system is that the data scanned from the image cannot be changed the image is just converted to a pdf format

**Smart Editor:**

In the Smart Editor application there are various kinds of functionalities that can be performed are below:

1. Image can be chosen from the camera or from the gallery.
2. After the image is scanned the image is not converted to a pdf format. But rather the image is made to stay in the same format.
3. The text in the image is scanned and now the major functionality is that the text scanned can now be edited and can be shared with your friends.
4. The text can be copied and edit the text in the app itself.

* The most important function of Smart Editor is that it can edit the text it scanned and if the user wants he/she can send only the text without taking the problem of sending the complete file.

**III. PROPOSED SYSTEM**

**Method:**

Our proposed system is OCR on a grid infrastructure which is a character recognition system that supports recognition of the characters of multiple languages. This feature is what developer call grid infrastructure which eliminates the problem of heterogeneous character recognition and supports multiple functionalities to be performed on the document. The multiple functionalities include editing and searching too whereas the existing system supports only editing of the document. In this context, Grid infrastructure means the infrastructure that supports group of specific set of languages. Thus OCR on a grid infrastructure is multi-lingual.

The benefit of proposed system that overcomes the drawback of the existing system is that it supports multiple functionalities such as editing and searching. It also adds benefit by providing heterogeneous characters recognition.

![Fig. 1 Scanner](image)

**Features**

Smart Editor is a tool which can help an individual scan images and convert them into documents. These documents can then be shared as the user wants to. In the running world there is a growing demand for the users to convert the printed documents in to electronic documents for maintaining the security of their data. Hence the basic OCR system was invented to convert the data available on papers in to computer process able documents, So that the documents can be editable and reusable. The existing system / the previous system of OCR on a grid infrastructure is just OCR without grid functionality. That is the existing system deals with the homogeneous character recognition or character recognition of single languages.
Conceptual Model

OCR (optical character recognition) is the use of technology to distinguish printed or handwritten text characters inside digital images of physical documents, such as a scanned paper document. The basic process of OCR involves examining the text of a document and translating the characters into code that can be used for data processing. OCR is sometimes also referred to as text recognition. OCR systems are made up of a combination of hardware and software that is used to convert physical documents into machine-readable text. Hardware, such as an optical scanner or specialized circuit board is used to copy or read text while software typically handles the advanced processing. Software can also take advantage of artificial intelligence (AI) to implement more advanced methods of intelligent character recognition (ICR), like identifying languages or styles of handwriting. The process of OCR is most commonly used to turn hard copy legal or historic documents into PDFs. Once placed in this soft copy, users can edit, format and search the document as if it was created with a word processor.

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The Limitations are:-

The drawback in the early OCR systems is that they only have the capability to convert and recognize only the documents of English or a specific language only. That is, the older OCR system is unilingual.

Design Phase

It is the first step in moving from problem domain to solution domain. The purpose of the design phase is to plan a solution of the problem specified by the requirements document. Starting with what is needed, design takes towards how to satisfy the needs.
Thus, the software no longer relies on just texts and character gathering alone. It now proceeds on gathering some distinct images and graphs that form part of the documentation.

Snapshots:-

1) Home Page

2) Selection of image

3) Scanning Image

4) Editing Data

5) Share with Friends

6) Copy to Clipboard

V. CONCLUSION

OCR can become a powerful tool for future data entry applications. However, the limited availability of funds in a capital-short environment could restrict the growth of this technology. But, given the proper impetus and encouragement, a lot of benefits can be provided by the OCR system. The automated entry of data by OCR is one of the most attractive, labor reducing technology. The recognition of new font characters by the system is very easy and quick. Developer can edit the information of the documents more conveniently and developer can reuse the edited information as and when required. The extension to software other than editing and searching is topic for future works. The Grid infrastructure used in the implementation of Optical Character Recognition system can be efficiently used to speed up the translation of image based documents into structured documents that are currently easy to discover, search and process.

REFERENCES