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RESEARCH ARTICLE

Integrated System for Reading Multiple Files

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Abstract— today to read documents having different extension, a user need to install different application which can open those documents. Let's take an example if a user wants to view a word document than there should be MS Office installed on his/her own PC. In addition, to view PDF file, there must be Adobe PDF Reader installed. Similar is the case with Multimedia files. We need to again install different software applications. Now just for viewing all these files, installing all such application would be hectic and cumbersome task as it utilizes many PC resources like hard disk space, CPU memory etc. In addition, if a user subscribed to a licensed version of this software/application than there is large cost involved in it. Keeping all the above said problems in mind, we decided to build such an application that would include all these applications. The Global File Reader will be combination of Notepad, MS Word, Web Browser, Image Viewer, Media Player and Adobe PDF Reader. Using Global File Reader, a user will be able to view all different, most common file formats. The main USP of Global File Reader is that it can open almost all the types of documents and multimedia files under it. The tabbed feature allows you to open different files retaining or without closing the previous one. The Global File Reader is one man show i.e. what all different applications, text editors, media players do, it does all. It is integration or consolidation of all different applications.

Keywords— GFR (Global file reader); MS word; Adobe PDF reader; Web Browser; MDI (Multiple Document Interface)

I. INTRODUCTION

This application is a Global File Reader that supports a very wide array of file formats, including text, images, audio and video, Webpages. While it is able to juggle with all these formats, Global File Reader comes with a very user-friendly interface and, in case you still need assistance, there's a detailed help file to lend you a hand. The program is able to deal with BMP, JPG, GIF, PNG and other picture formats, but also with MP3, MIDI, MPG, WMV and AVI files. Furthermore, it has no problem to open documents, text files, pdf files which mean it can be used to view the majority of files on your system. The configuration menu is gigantic and includes all kinds of options, starting with interface settings and ending with the way it manages text and multimedia files. The Global File reader is a simple way to work with multiple file formats at the same time from a user-friendly and pleasant interface. It allows you to search your computer for pictures, sounds, music, documents, and multimedia files. There are number of articles mentioning file viewers in software and computer engineering journals, primarily with respect to the role of file viewers in software design. For example, a file viewer is application software that presents the data stored in a computer file

in a human-friendly form. The file contents are generally displayed on the screen, or they may be printed. Also, they may be read aloud using speech synthesis.

File viewer is limited-functionality software in the sense that it does not have a capability to create a file, or modify the content of an existing one. Instead, it is used only to display or print the content.

II. BACKGROUND

A number of articles mentioning file viewers in software and computer engineering journals, primarily with respect to the role of file viewers in software design.

Following are some disadvantages of the current system:

- File viewers do not edit files, yet it is common for them to be able to save data in a different file format, or to copy information from the viewed file to the system-wide clipboard.
- A file viewer is limited-functionality software in the sense that it does not have a capability to create a file, or modify the content of an existing one. Instead, it is used only to display or print the content.
- There is the issue of installing multiple softwares for opening different types of files. Hence, “Disk Space Management” is an important issue which is generally taken care off.
- “Memory Management” is a need of the hour.
- To view different documents, a user has to install different application related to it. E.g. - to view a word document then there should be MS Office installed on PC. In addition, to view PDF file, there must be Adobe PDF reader installed.
- A hectic and a cumbersome task as it utilize hard disk space. Therefore more CPU utilization.
- Licensed version of this software/application costs more.

III. RELATED WORK

Our main aim is to develop an user friendly environment i.e. To design and build a system that can switch between as many formats as possible, as robustly as possible and visualizing the file’s contents. To build such an application named “The Global File Reader” that would be consolidation of all the different applications. “The Global File Reader” will be the combination of most widely used windows application of text documents like Notepad, MS Word, PDF Reader and Multimedia files such as Image viewer, Media player etc. This will reduce the efforts expected from the user and thus will provide more luxury. In our project we are trying to use the concept of Dynamic Link Library (DLL) in order to omit the need of different types of converters required at each step. DLL, which is non executable code, will provide the required support (internal library) to the main interface which we are trying to create. File viewers do not edit files, yet it is common for them to be able to save data in a different file format, or to copy information from the viewed file to the system-wide clipboard.

In our project we are trying to use the concept of dynamic linking library (DLL) in order to omit the need of different type of converters required at each step. DLL, which is non-executable code will provide the required support (internal library) to the main interface which we are trying to create. The dll is available majorly with asp.net framework. Thus we are planning to incorporate dll and similar features of asp.net framework in our project in order to make it as much user friendly as possible.

A simple MDI form will be used here. MDI stands for multiple document interfaces. Hence as the name suggest it will support multiple file formats [8].

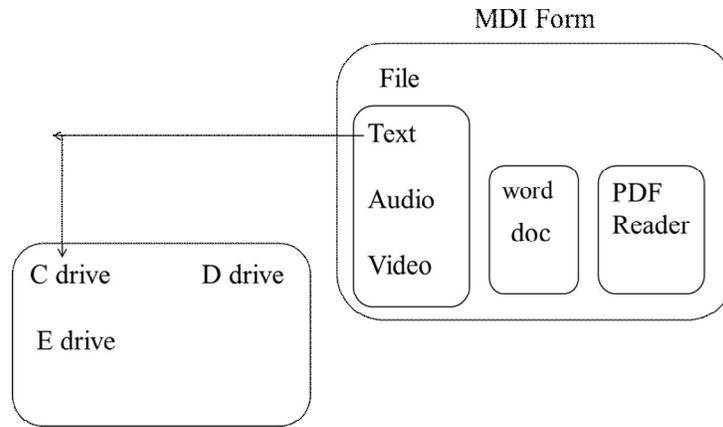


Figure 1: Architecture of GFR

Now the diagrams below shows the types of file formats to be supported and those which are not to be supported.

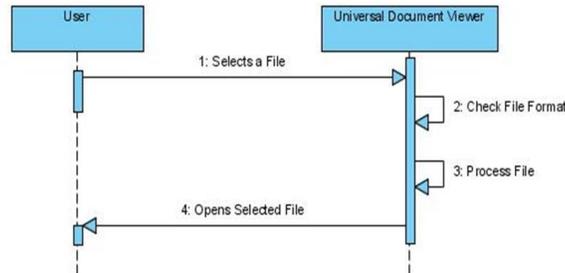


Figure 2: File Format Supported

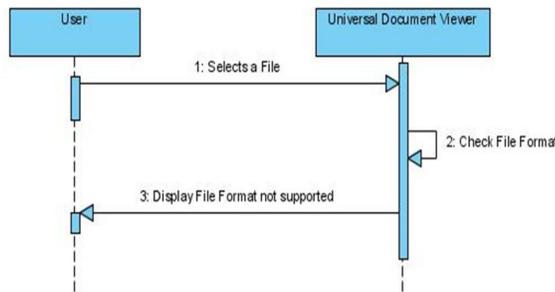


Figure 3: File format not supported

A file viewer is limited-functionality software in the sense that it does not have a capability to create a file, or modify the content of an existing one. Instead, it is used only to display or print the content. There is the issue of installing multiple software for opening different types of files. Hence, “Disk Space Management” is an important issue which is generally taken care off.

“Memory Management” is a need of the hour. To view different documents, a user has to install different application related to it. e.g. - to view a word document then there should be MS Office installed on PC. In addition, to view PDF file, there must be Adobe PDF reader installed [10].

A hectic and a cumbersome task as it utilize hard disk space. Therefore more CPU utilization. Licensed version of this software/application costs more. Utility of Taskbar space is also more.

This shows how our work is exactly going to work. Just like any other file we are going to save our GFR in a programming drive and then various paths will be led as per the user requirements. This is a general flow graph. It just gives us the tentative idea about our project.

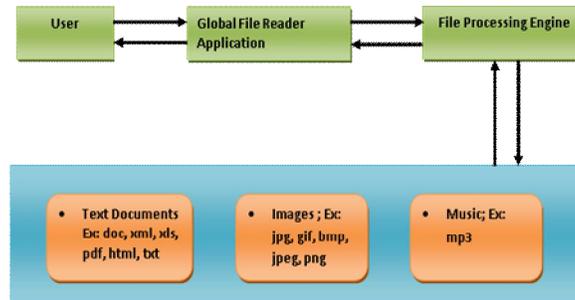


Figure 5: Proposed Approach

The figure above shows how exactly our project is exactly going to work. This is our proposed approach.

IV. BASIC MODEL

In the following diagram the basic approach is given,

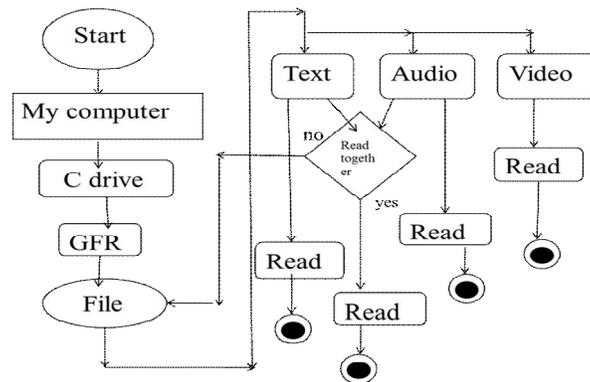


Figure 4: Flow Graph

V. SYSTEM DESIGN

The GFR will be supporting following file formats:

1) **TEXT**: Today in order to be able to read/update/modify a particular text file format there must be different softwares installed in the user computer. For example if we wish to view a file with .pdf extension we need to install the adobe reader in the computer. If adobe reader is not installed in such a case then, it's not possible to view the contents of that file [3]. In this way it becomes cumbersome to install all the different softwares required to view the different file formats. Thus, supporting the concept of “ALL UNDER ONE ROOF”, in the first module i.e. the “text” module we are trying to have the required support

available for as many as file formats as possible. These include common file formats like .txt, .doc, and some advanced formats like .docx, .pdf, etc. [4].

In this module, there will be a list of text file formats available to the user to choose from. The entire list will appear in a drop-down fashion so that the user gets to pick from the entire list. In the API, this will be shown alongside the other modules. It will be reflected as one of the options in the main list of the basic page. Here the user will definitely get a good and clear idea about the utility spectrum of the software.

2) MULTIMEDIA: Today there are many different types of formats available in case of audio/video files. In order to be able to view files belonging to different extensions there is a need to install different types of players in the user computer. Even if a single player is able to interpret the contents of the file properly, while actually playing the audio/video contents of the file, the user may experience loss of quality. The quality of music or the visual may not be as good as it should be. Hence in order to eliminate the additional work load of the user and to ensure the maintenance of the original quality, we have included the multimedia module in the project [1]. In this module we will combine the most commonly used formats such as .mp3, .mp4, .vlc, etc. Thus, the user will simply be required to choose from the given list of formats and then the file will be automatically be played in the computer. In this way we will be able to provide additional functionality to the user and also maintain the quality of the file properly.

In this module a drop down list will appear and by clicking on the required format the respective dll (dynamic link library) of the specified player will be called and then the file would be played for the user.

3) WEB BROWSER SUPPORT: We cannot imagine our world today without internet. Almost everything and everyone today is connected via internet .In today's scenario we exchange data at tremendous rates. Thus in order to deal with it, the web pages must be opened and displayed fairly quickly [5]. This can be achieved if we give the support that is required for opening and displaying the web pages in the software itself. As now-a-days the user doesn't have much time to spare, the pages must be processed quickly so as to satisfy the user's need for speed. Thus, in our third module we are aiming at reducing the time required to load the web pages by inculcating the back hand support required for the proper loading of web pages in the software itself. This will lead to a very good throughput of the system.

The problem that the users face of not being able to get on the required web page as soon as they would like to, would be minimized if not completely removed. The .html extension pages will thus be loaded as soon as the user chooses that particular option. In our software the user will only be required to select the web page of his/her liking and all the loading and speed issues will be handled by the software.

VI. SCREEN SHOTS

The above work resulted into the following,



Figure 6: General View

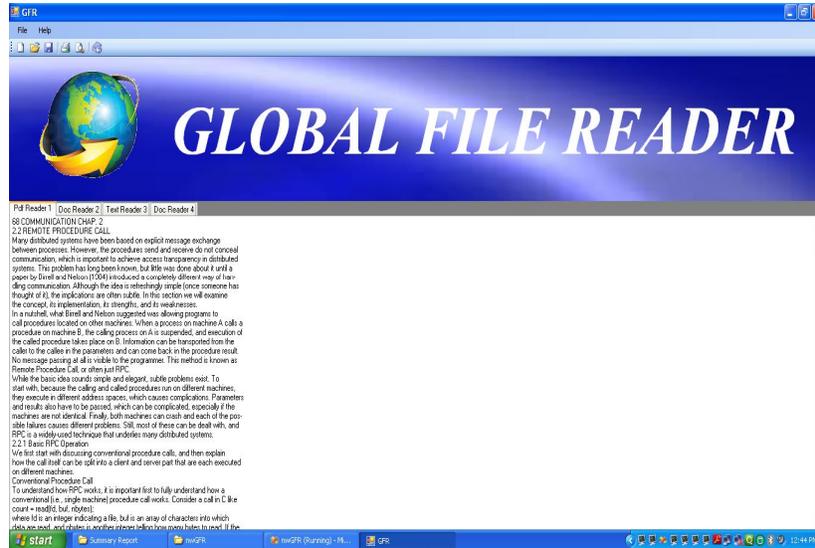


Figure 7: Text Module



Figure 8: An Image View



Figure 9: A Video View

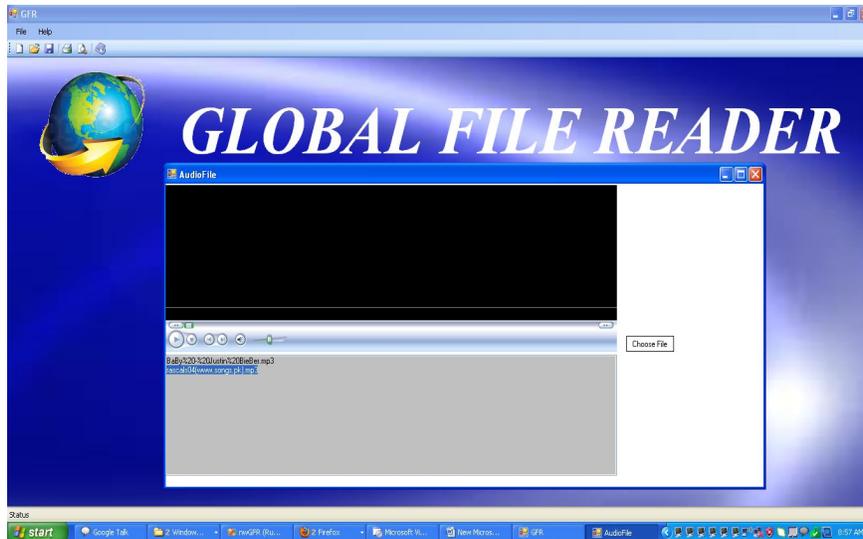


Figure 10: An Audio view

VII. CONCLUSION

Global File Reader integrates the most commonly used text files under a common roof. It also is capable of opening the commonly used image file formats. The user overhead of installing additional software on the system is greatly reduced. It also increases the performance of the entire system as a whole, as it is able to handle the work of multiple software. The usual problems of multiple installations faced by almost all users will be overcome. As its platform independent it is able to work properly on different platforms. GFR can also be used in a network as it will promote resource sharing.

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