

VMEG Mini Tool Kit - An Intelligent Approach for File Conversion

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Abstract - File convertor helps the organization to handle files within the cloud to decrease the data storage on the devices and investment for the storing devices. It easily converts the files in different format based on the required format. The output produced is feasible, improves operational activity and scalable web experiences. File conversions have become an important part in the present days due to COVID 19 pandemic. Many institutions have adopted online modes of teaching and requirement of the conversion tools had gradually increased. It implements the basic and required file conversions which are essential for a user in the present scenario. This file convertor is a simple tool that has an optimal way of implementing the file conversions format. It can convert file to PPT, PDF, DOC (document) format. The user need not have the complete knowledge about the conversion. The VMEG Mini tool Kit is open source, adaptable and it consumes least amount of time for a file conversion. Its time complexity is less. The website is simple and easy to understand which means a user can use the website without having the complete knowledge on the website. We focused on the time complexity as the files need to convert to various formats which is a complex process, thus we focused on a less time-consuming convertor. We assure the users that the website will consume less time for conversion and is different from other websites. The website runs efficiently, smoothly and requires less human interference and is user-friendly. In this website we have basic conversions, and a user can efficiently and accurately convert his files. And the process of conversion is also very simple, and the user can utilize it whenever he requires.

Index Terms - Software, Document, Data Base, Conversion, Tool Kit.

INTRODUCTION

The world has become advance in the field of science and technology. Many platforms have been setup for the development of country. Technology made a huge impact on education system. Much software's are

being developed for the welfare of the people and to reduce the burden on humans. Technology is developing day by day and introduced many software's and applications which reduced the burden on humans. Within a time slice we can complete the tasks using machines which runs on various software's. Many applications are available on the internet which are built for various problems.

The world is now facing the pandemic which resulted in great losses in various aspects of life. It made a huge impact on the gross domestic production of the country. The pandemic brought a drastic change in education system. Due to pandemic many educational institutions have come up with online education. The faculty need to educate the students online and the students need to submit the copies of written part in various format. The various formats include pdf, doc, ppt for documents.

The conversion of files is not easy to deal with. Students must submit the scripts in various formats. It has become a big task for the students to search for a convertor or to download a proper tool for the conversion of files from one format to another. It is complicated to find all available formats in a single website. Here we bring the platform of converting all files in a single website. Conversion is easy with VMEG tool Kit. It's easy to easy and user friendly. Files are converted with a single click, efficient and accurately. The VMEG convertor requires minimum time to convert a file and download. The files are exact copy of the original content which does not require any modifications.

The format is modified without any modification of the content. The tool Kit is free, and anyone can access the website through internet. The tool Kit provides easy way to access files in different formats. This is useful not for only students but also for the personal who requires online documentation for company purposes or any other legal usages. Many peoples

search for a perfect document converter of file convertor to convert their files fail to search a required website or software which meets their requirements. The user can use the convertor to change the format of files so that one can sent to the receiver and also one can also use the convertor to change the format of the file if he wants to work on that file.

It is like encryption and decryption in the networks. We can also convert documents files to pdf if we don't want to have any changes to that file Faculty can send the question or any assignments in form of pdf by using this convertor and also change the format if the faculty likes the student to do modification on the same file. The VMEG Mini-tool Kit convertor necessitates minimum time to convert a picture and download it. The files are the replica of the initial content which doesn't require any modifications. The format is revised with no modification of the content. The VMEG Mini tool Kit outfit is free and open-source, anyone can access the website through the internet. The VMEG Mini tool Kit outfit provides a way for accessing images in various formats.

The student can change the document if he requires to submit in another format. Due to pandemic many online exams are also conducted. The students may need to write and scan the answer scripts and upload them. The students need to submit the answer scripts in pdf format. This requires a conversion tool which convertors the documents in pdf format and make sure that it cannot be altered.

The front-end is developed using HTML, CSS, script, bootstrap for the VMEG Mini tool Kit. Back-end has many procedures and involves many steps. Django is the main back end and used for the database. The Django by default uses MySQL lite3, so we can say that this is the main database. The file that is uploaded by the user from his electronic device will be stored in the database and therefore the process begins conversion by using the code present in the VMEG Mini tool Kit. It uses the library "PYWIN 32" as it is the most used library for file conversions. It produces accurate file conversion without any data manipulation or any changes in the user data. After the file gets converted the file will be stored in the database itself. User can download the file by a click on the download button.

The documents in various format need to be converted as pdf for the submission. The business, academic etc. Can also use the convertor to convert document files

in required format and upload them in their blog or use them for their purposes. Some government or private offices require a format of documents files as a proof which can be converted by using the VMEG tool Kit. Online applications also require submitting copies of related documents in a particular format which requires a convertor to change the format of the documents and upload it. Uploading of documents on various websites require a particular format of documents to sort them faster and easier.

LITERATURE SURVEY

Due to pandemic, file conversion has become a daily work for every user, everything is being in the virtual mode most of the times. Usually, users check if there is a website or an app which is for free, quality of the file after getting converted and if there is security, compatibility on their device, and some particular things before converting files. These specific drawbacks have been overcome within this tool.

So, below are some research papers which are a bit similar to our project and have helped us to know how data files had converted and the use of particular language in the project.

1.Kenton McHenry et al. (2008) this survey states about data content, file formats, and viewers. It has introduced by file conversions with the packages for converting the data files into another format. It also provides specific information on file formats as well as existing data sets [1].

Wolberg et al. (1978) this study uses convert language for converting data files and facilitating the program. This data file is modified according to rules in the above language. The converters programmed in this language are easier than other programming languages [2].

Joubert et al. (2011) this study deals with the comparison of two methods for the conversion of data files. These methods are used for performing metrics to reduce the size of resultant data files [3].

Shin et al (2012) this project dealt with the file for users to enable the conversion of files. The principle of this work is to organize the models for manufacture of various files [4].

Choi et al. (2009) the work recommends above paper to identify the file formats. It mainly focuses on various file formats and links to websites where converters are found [5].

Somawanshi et al. (2019) this particular survey states that which format to use in publishing a document [6].

Jestrab et al. (2006) the work focuses on particular conversions of files on a development project and to help users by the time management and to make users know about the benefits of sharing files [7].

Anjali et al. (2021) this work examines the functions for management of the files by making it suitable to present the feedback [8].

Van Horik et al. (2011) this finding shows the information towards the results of the end data file. It contains the details of formats developed by other users [9].

Bajcsy et al. (2002) this study suggests the frameworks for converting the data files into other formats using the available software by evaluating the content across conversions [10].

McHenry et al. (2009) this study uses existing 3D file formats by using various packages. Most of them are source files and contain incomplete specifications [11].

van Horik et al. (2009) this study describes the overview of the paperwork results in the ending phase for converting files [12].

Christopher K. Hess et al. (2003) it describes about the file system that organizes the data based on information and supports various format conversions to accommodate device context describes various computing infrastructure and show how the features of the file system to reduce complexity [13].

Jim X. Chen et al. (2000) it is used to make 3d file formats which are easy to handle and reduce most developers programming effort. High level graphic tools are build using this and libraries support 3d file format by providing series of function. It imports stores and manipulates 3d models [14].

Yu Qian et al. (2014) it deals about the transformation's methods with both simulated and real FCS files. They developed an open-source software system FCS Trans that can convert and transform FCS files. It avoids linear transformation limitation on negative, identifies a logical transformation parameter, open source and free [15].

Wilkins R et al. (1993) it deals with the calculation of distances between the points describes in latitude and longitude using Postal Code conversion File. Distances are calculated between enumeration area centroids for the population and enumeration area

centroids for the hospital. For health application this method was widely used [16].

Bonfield et al. (2014) it deals with the storage devices and the development of the CRAM format. It was a prototype in python which is followed by Picard. The breakdown of the file is done within the Scramble Cram [17].

Bowang Chen et al. (2009) this implementation is done for Microsoft excel in windows 2000, XP, Vista and Windows 7 beta. This widow can handle the files in different formats and converts them into different formats. It's an open-source software [18].

Adusumilli et al. (2017) in this the files are converted to specific binary files to open-format files. It uses MS Convert and MS Convert GUI software in conversion. They provide various options for conversions and implications of each option [19].

Gilbert et al. (2003) they recognized a variety of sequence formats. A set of sequences are required for a format which may be required for another. To overcome this problem, they have come up with a solution. The solution is Read Sea which can read and write 18 different formats [20].

Faircloth et al. (2006) it is a platform independent program which is provided in GUI and command line versions for other platforms. It allows rapid or quick reformatting of data from output files. The program will rearrange the data into three formats [21].

Niels Hulstaert et al. (2019) this deals with the big data age. Large amount of data is obtained and for processing it requires huge effort, operating systems, cloud infrastructures. The product name is ThermoRaw files which is open source and cross platform tool that converts raw files into file formats such as MGF which is standard file format. They build a package, interface for those who cannot properly use the command line [22].

Christian Rödenbeck et al. (1997) in this publication the single file system with particle exchange at the margins and an attractive least far neighbor particle interaction is discussed. They derive the equations which determine these quantities. Only one-dimensional data is considered [23].

S. V. Nedeia et al. (2002) they used Monte Carlo methods and analytical techniques to investigate influence of length, diffusion and reaction rates on properties of single file system with a reaction. Mean files include only single file which means single

dimensional array. The result is based on diffusion rate of file [24].

PROPOSED APPROCH

The technology is advancing day by day. There is a significant development in the field of technology and science. It created a significant change in the lives of humans. Many innovative thoughts and inventions have been developed to solve the real time problems, increase efficiency and to reduce the mistakes done by humans. Technology is playing a key role in human lives which has become a part of humans. The technology is so advanced that it can create mechanisms like humans and perform actions better than humans. Recently the pandemic changed a lot in the lives of humans. It has changed the way of human life.

Drastic changes have been occurred in the human life as well as nature. The pandemic brought many changes in the field of science, technology, and social life. The format is modified without any modification of the content. The tool Kit is free and anyone can access the website through internet. The tool Kit provides easy way to access files in different formats. This is useful not for only students but also for the personal who requires online documentation for company purposes or any other legal usages. Many peoples search for a perfect document converter of file convertor to convert their files fail to search a required website or software which meets their requirements. The user can use the convertor to change the format of files so that one can sent to the receiver and also one can also use the convertor to change the format of the file if he wants to work on that file. Education has drastically changed from the recent years. Online classes are conducted in which the students are explained virtually without using proper aids. However offline education is quite different from online education. Assignments are given to students in the word of documents where the students have to write a copy and scan the documents and send them in a particular format. The students may also need to present their ppts in the form of pdfs or other document formats or they also prepare a word document where they need to send the document in the format of pdf. File conversion mainly includes converting file of one format to another format for example word to PDF. This task is done with help of well-known python libraries that includes pywin32 word2pdf and many

more. Whenever the user enters or uploads his/her file using an upload button and the file is directly stored in data base. From thee the file is processes(converted) and the converted file is also stored is data base. And the user/client file is downloaded typically using a download button.[11]

The front end is developed using HTML, CSS 3, BOOTSTRAP 4. The backend is developed by JAVA SCRIPT, SQLLITE 3 and DJANGO. The tool Kit provides various file format options where the files can be converted into different formats efficiently. The Tool Kit provides the required tools, basic file formats to convert files easy and faster. The user needs to click on required file conversion and upload his file with the suitable extension or format. The file will be converted faster without consuming more time. With the click on convert button user will be directed to new webpage where he can download his converted document. There are only few convertors online which provide multiple file formats. Most of the websites provide a single format convertor whereas in VMEG Tool Kit provides multiple file conversions in a single webpage.

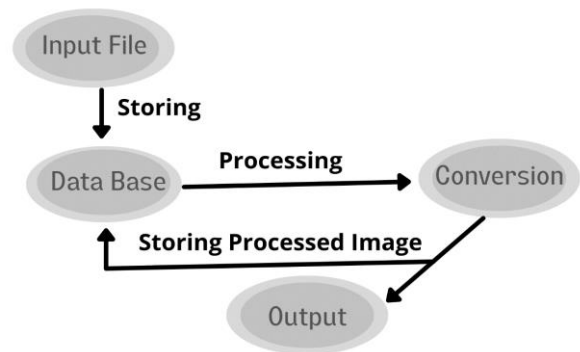


Figure 1: General Process Flow for the Proposed Approach

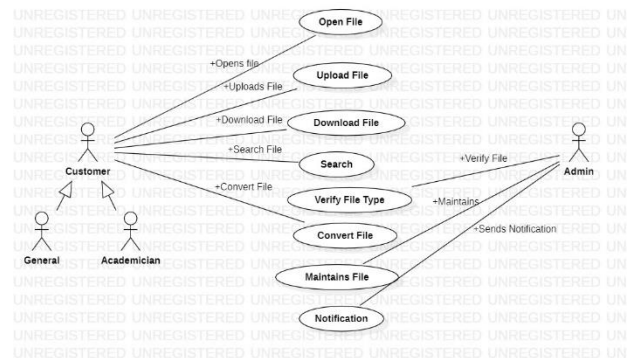


Figure 2: Use Case Diagram for File Conversion
The above diagram is the Use Case diagram for the File conversion. In this diagram we have four actors

namely Customer, General, Academician and the Admin. The Use Cases are Open file, Upload file, Download, Search, verify file type, convert file, Maintain files and Notification.

The General and Academician uses generalization relationship with the customer. The three actors namely customer, general and academician are associated to the open file, upload file, download file, search and convert file. The admin is associated with three use cases they are verify the file type, maintain the file and notification. The relationships used are generalisation and association.

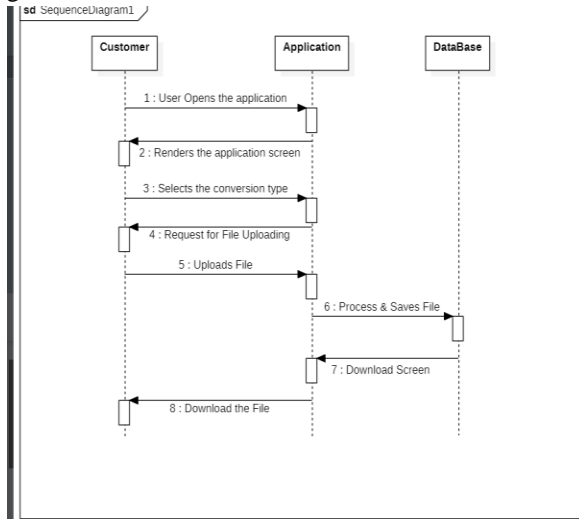


Figure 3: Sequence Diagram for File Conversion Process

Sequence diagram depicts the interaction between the objects and the sequence of steps. Here we have three objects customer application and the database. The customer interacts with the application to open the application renders the application screen. The customer selects the conversion type and the application requests the customer to upload file. The customer uploads the file and the application interacts with the database which processes and saves file. The database interacts with the application and shows or puts the download screen. The application shows the customer the download button which redirects to a new page where the customer can download the converted file.

Experimental Setup

Web development is one of the technologies which is making flourishing since 1992 and this the technology that lasts till life exists is web technologies. Web development predominantly includes two parts of

work. The first and fore most chore includes front-end development that comprises of designing and developing of static web pages that does not have many functionalities. There are several technologies namely HTML, CSS, JavaScript, Bootstrap and many more.

Second but the backbone of web technologies is backend development this adds much more functionalities to web pages that makes the user feel much better to interact with web pages. There are many technologies that provide these facilities mainly PHP, Django, Mongo DB and many more. Back-end development mainly fills the task of storing, processing, securing data which is uploaded or updated by the user/client. File conversion mainly includes converting file of one format to another format for example word to PDF.

This task is done with help of well-known python libraries that includes pywin32 word2pdf and many more.[10]

Whenever the user enters or uploads his/her file using an upload button and the file is directly stored in data base. From thee the file is processes(converted) and the converted file is also stored is data base. And the user/client file is downloaded typically using a download button.

The great feature in our application is that it has no file size limit, and the user can use our application for n number of times without paying a single penny. And our application is user friendly user/client is redirected to download page once the file is converted successfully.[9] By just clicking on the download button, he/she can download the converted files successfully.

Pseudo Algorithm

- Step 1: Uploading user file
- Step 2: Storing
- Step 3: Processing
- Step 4: Uploading converted file in data base
- Step 5: Downloading through download button



Figure 4:Technology ecosystem for the proposed approach

RESULTS AND DISCUSSION

When user do not have the desired file format for a particular program or a task then they need to convert it to the one that suits, this file converter is very accessible to convert to such format which they wanted to and makes compatible with various programs which we need to use. In addition, this file converter also makes batch conversions so users can convert multiple documents to the same format at a time, and generally it supports conversion between two specific file types.

The interface is intended to be as light as possible in order to keep the application feasible. In order to perform conversions users, need to follow step by step process, so that they simply need to upload the original document/file, select which file type they would like the document to be converted to, and then convert.[12] A recovery option/mode may be available in file converter, allowing files to be safely converted from one format to another and Files can be converted anytime on any device.

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The time complexity of VMEG Mini tool Kit is less which differentiates it from other online file converters. The time complexity is represented in the form of bar graphs in below figure which shows the difference.

So, we can make PDF to PPT, DOC, and vice versa conversion to our convenience without any conversion

knowledge and this is fully online tool conversion which will not slow down the device and supports any of the operating systems and the whole process of this conversion is totally safe n secured.

It is a service provider for converting files from one type to another in online mode. The files which are to be converted are secured, so we can say there is privacy is maintained in this conversion process. It doesn't matter about the OS used by the user, it can be of Windows, Apple OS X or Linux, etc operating system. In the conversion process, there will be no change in the quality of the file, and the results will be accurate.

For example, a colleague created a file on Mac operating system, that may not work on windows, or if any website that asks you to upload a file might insist that it is of a specific type of file. whatever uncertainty we encounter in that difficult situation, one can download the app that will help the situation. To access such given or shared files, we may need to convert them to the convenient file type.

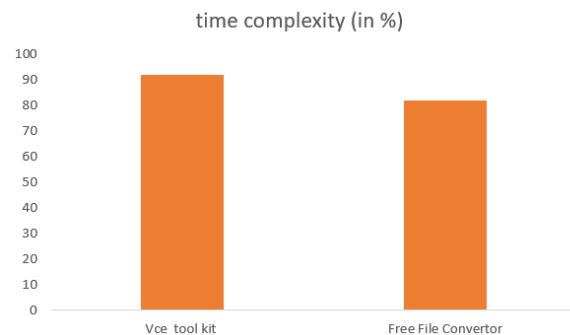


Fig: Comparison of time complexity

CONCLUSION

Due to the pandemic online education is introduced in the education system. The online education should not become a disadvantage to the students. The academic at this stage should be given more preference and proper utilization of resources should be taught to the students. This is the beginning of online education but later we may see this approach of education in the future. Learning about all the technologies help us to work in a simple and smart way. Conversion of files can be done within few seconds without any third person to interfere.

The conclusion we get is that file is converted based on the user requirement which means the output file will be in format of the user requirement. There are

less flaws in the output received by the user. The output produced is fast and requires less involvement of the user to interact during file conversion process.

FUTURE WORK

The VMEG Mini tool Kit is open source, free of cost and user can access the website through the internet. The VMEG Mini tool Kit is not meant for then students or faculty any user who needs the files conversions for business, paperwork or any other type of usage can use the Tool Kit File convertor helps the users to convert files dynamically and the conversion of file is flexible. The VMEG Mini tool Kit is embedded with various files conversions such as PDF, PPT, DOC (document). The user can convert files without having knowledge on the website.

To access the file convertor the desired file has to be uploaded by the user through his device and select the proper file. After uploading the file click on the convert button provided below the upload file. On the click of convert button, the user will be redirected to a new webpage where he is provided with a download button. The user needs to click the download button the file will be downloaded in the user device on a single click.

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