

On-line Help system to complement the HowTo's and Man pages

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- **Introduction**
- **Existing online Help systems, their Features and Limitations**
- **Our proposed idea**
- **Design**
- **Plan of Implementation**
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Introduction

- One of the biggest challenges faced by a new linux user is the sheer number of programs and commands available at the command line
- Linux documentation can be found in man pages, info files, HowTos and FAQs
- Man pages belonging to software are usually distributed together with those software



Existing online Help systems, their features and Limitations

System provided by linuxdevcenter
(<http://www.linuxdevcenter.com/linux/cmd/>)

<div> <div>a</div> <div>b</div> <div>c</div> <div>d</div> <div>e</div> <div>f</div> <div>g</div> <div>h</div> <div>i</div> <div>j</div> <div>k</div> <div>l</div> <div>m</div> <div>n</div> <div>o</div> <div>p</div> <div>q</div> <div>r</div> <div>s</div> <div>t</div> <div>u</div> <div>v</div> <div>w</div> <div>x</div> <div>y</div> <div>z</div> </div>				
a	e	l	p	t
aclocal	e2fsck	last	passwd	tac
addr2line	e2image	lastb	paste	tail
agetty	e2label	lastlog	patch	talk
anacron	echo	ld	patchchk	talkd
apmd	egrep	ldconfig	perl	tar
apropos	eject	ldd	pidof	tcpd
apt	elvtune	less	ping	tcsh
ar	emacs	lesskey	portmap	tee
arch	env	lftp	poweroff	telinit
arp	etags	lftpget	pppd	telnet
as	ex	link	pr	telnetd
at	expand	ln	praliases	test

Limitations

- No searching facility(of commands) available
- No filtering facility is available
- No upload facility available
- No way of postig questions
- All the Help files are clustered in a single section



Existing online Help systems, their features and Limitations

System provided by www.man.he.net
(<http://www.man.he.net/>)

Use "Linux Man Pages Online" to search the Linux manual pages via the web

Search By Name

SEARCH STRING: All Sections

Search By Section

[Section 1](#)
[Section 2](#)
[Section 3](#)
[Section 4](#)
[Section 5](#)
[Section 6](#)
[Section 7](#)
[Section 8](#)
[Section 9](#)



Features

- Commands are classified into sections based on the type of command
- Man pages are available in HTML format
- Search facility is also available
- User can also search into sepcific sections available
- User can browse into specific sections



Limitations

- Section-name doesn't convey any information about the type of commands stored in that section
- It lacks other formats such as pdf,ps etc
- Search does not support wild card characters
- No upload facility available
- No way of postig questions



Existing online Help systems, their features and Limitations

System provided by www.man.linuxquestions.org
(<http://man.linuxquestions.org>)



The screenshot shows the LinuxQuestions.org website. At the top, there are seven penguin icons with question marks above them, followed by a lightbulb icon. Below this is the text "LinuxQuestions.org". To the right, there are several buttons: "register", "login", "glossary", "reviews", "calendar", "links", "f.a.q.", "search", "answers", and "home". Below the header, there is a section titled "cat man page (Printable Version)". Underneath, there is a link "Browse Man Pages by Section" and a link "or Search Man Pages by Term:". Below these links, there is a search form with the following fields: "Term:" with the value "cat", "Section:" with a dropdown menu showing "All Sections", and "Output format:" with a dropdown menu showing "html". Below the search form, there are two buttons: "Submit" and "Reset". At the bottom of the page, there is a footer with the text "CAT(1)" on the left, "FSF" in the center, and "CAT(1)" on the right. In the bottom right corner, there is a logo of the Indian Institute of Technology Bombay.

Features

- All the features of second example
- Section name conveys information about the type of the commands in that section
- Man pages are provided together with search-form
- Man pages are available in Plain text, Pdf, Ps, HTML format



Limitations

- Search does not support wild card characters
- No upload facility(of man pages) available



Our proposed idea

- Provide man pages and linux-HowTos.
 - man pages are provided in html(default), ps and pdf formats.
- lists each file as well as subdirectories as links in browser
- Alphabetical indexing of available man pages
- User can download all the required directories(in compressed format).
- Provide Search facility
 - search supports wildcard characters
- Provide Open discussions
- Uploading of new man pages



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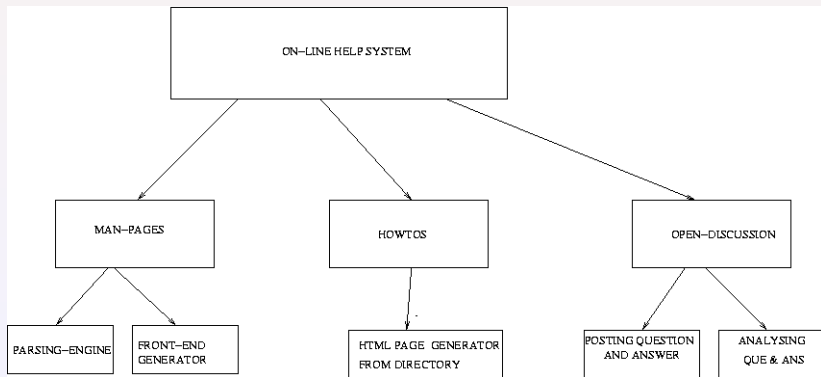
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Design and Implementation

Block Diagram



Design and Implementation

- Parsing Engine
 - Converting man pages into Specific HTML Format
- Frontend Design
 - Interface to the user
- Search Module
 - Search the required Help file and display it in the browser
- Parser to convert HTML Help files into Pdf and ps format



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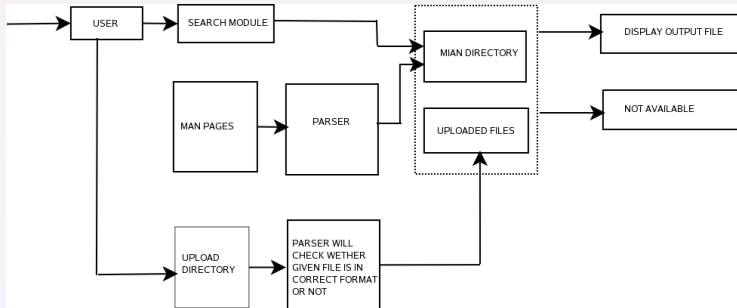
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Design and Implementation

Flow chart



Parsing Engine

- The parsing engine takes man pages as its input and converts them into HTML Format
- These HTML pages uses only H1, B, Pre, P, HTML tags
- All the Parsed files(converted into HTML format) will be stored in Alphabetical order



Parsing Engine

Original Tag	Transformed Tag(HTML)
. comment	<!comment>
.TH header	<TITLE>header</TITLE>
.SH text	 text
.B text	text
.fl	<U>text</U>
.br	
.PP or .IP or .TP	<P>

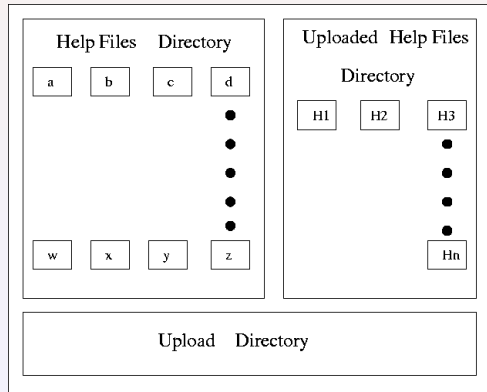


Search Module

- Wildcard characters can be used for searching
- Search will be Fast
- Output will be available in HTML(default), Pdf and Ps formats



Backend Strcture



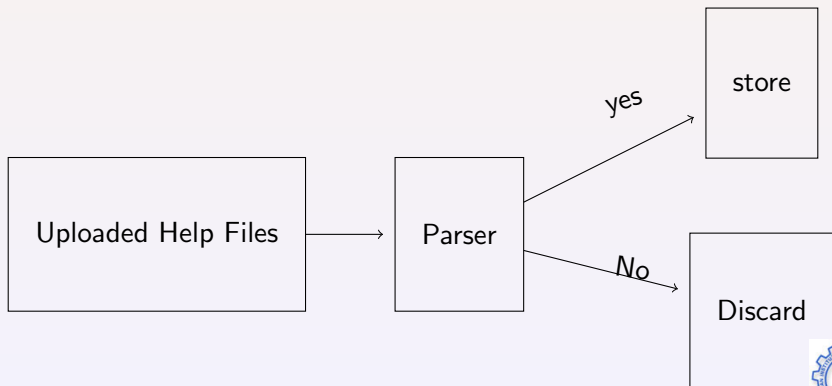
Backend Strcture

Three seperate directories are maintained

- For Storing all the Help files, parsed by Parse Engine
- For storing all the uploaded Help files, after checking them
- For storing all the Uploading Help files

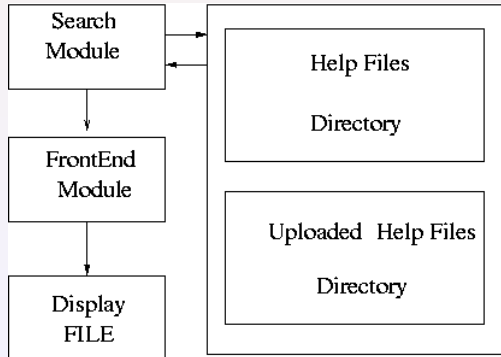


Parser for parsing the uploaded Help files



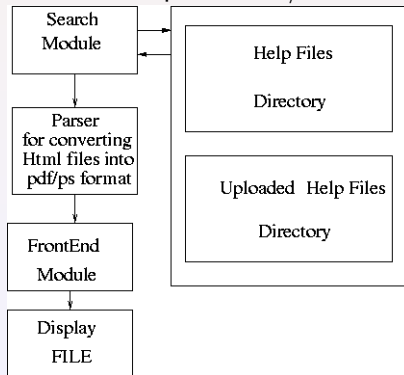
Module for converting HTML files into Pdf/Ps format

User wants output in HTML Format



Module for converting HTML files into Pdf/Ps format

User wants ouput in Pdf/Ps Format



Conclusion

- This entire system tries to solve one issue, it should enable the new user the ability to get up and running in the shortest amount of time possible.
- This on-line Help system is portable across all networks connections and it does not need any particular configuration to operate.
- Parsing engine is designed with an eye towards an extremely small footprint.



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References

- <http://www.math.unm.edu>
- <http://www.linuxhelp.net>
- <http://unixhelp.ed.ac.uk>
- <http://linux.ctyme.com>



Gnu-Plot

