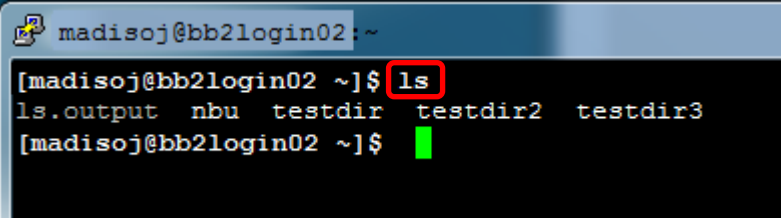
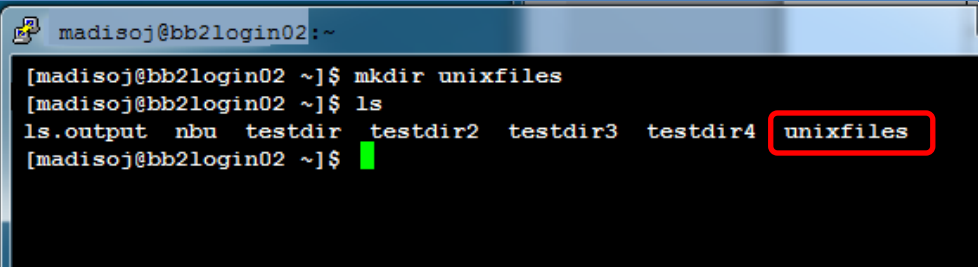
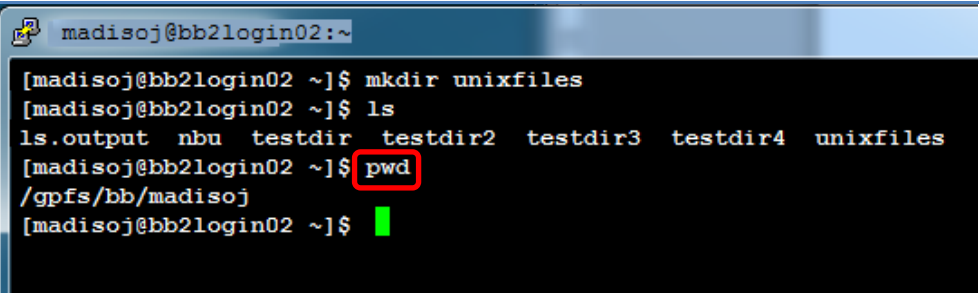
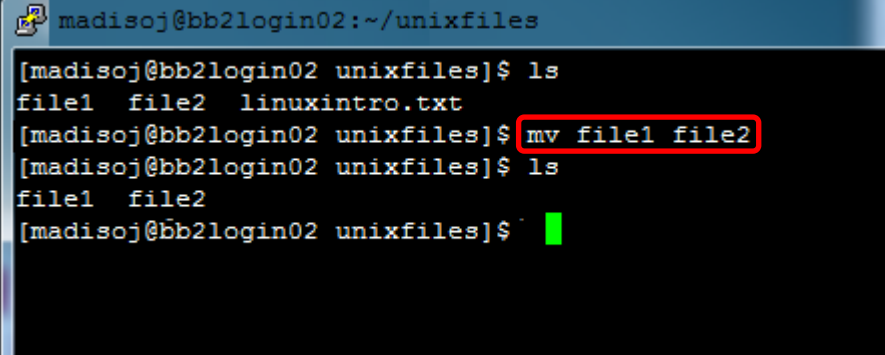
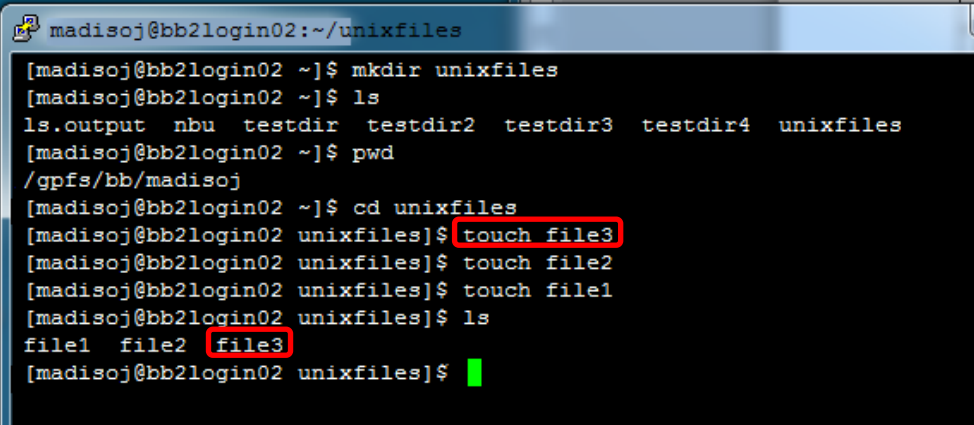
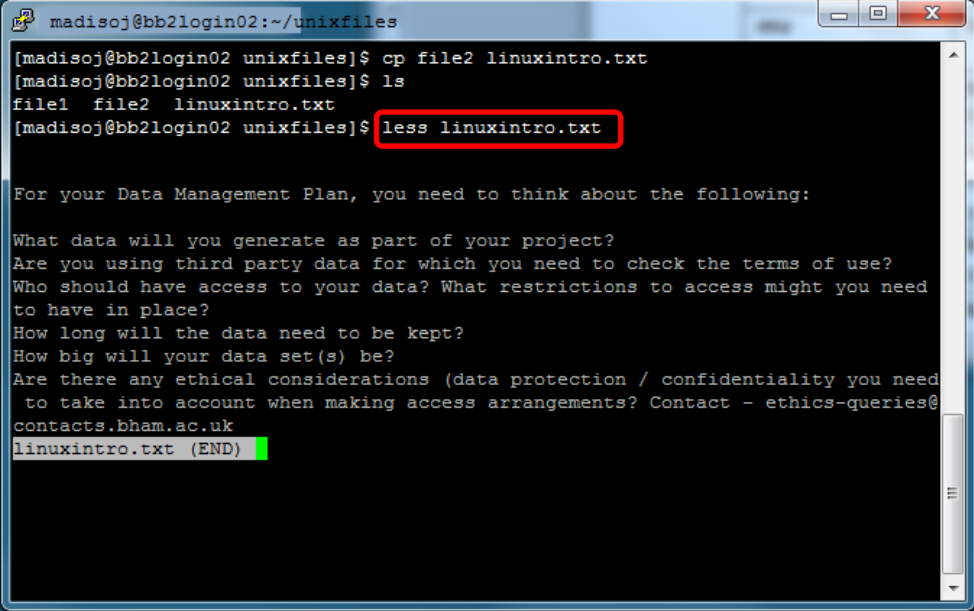


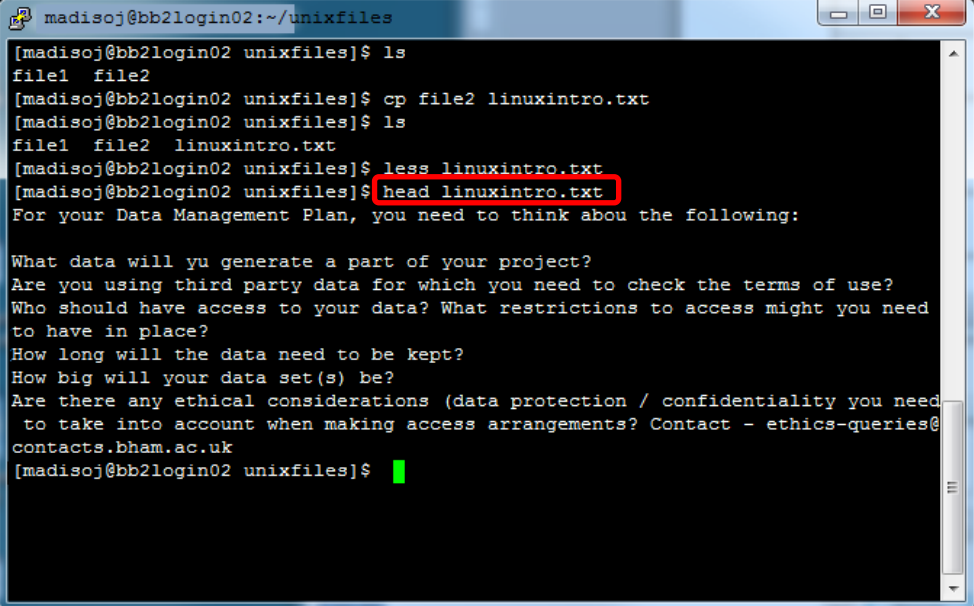
Intro to Linux Examples

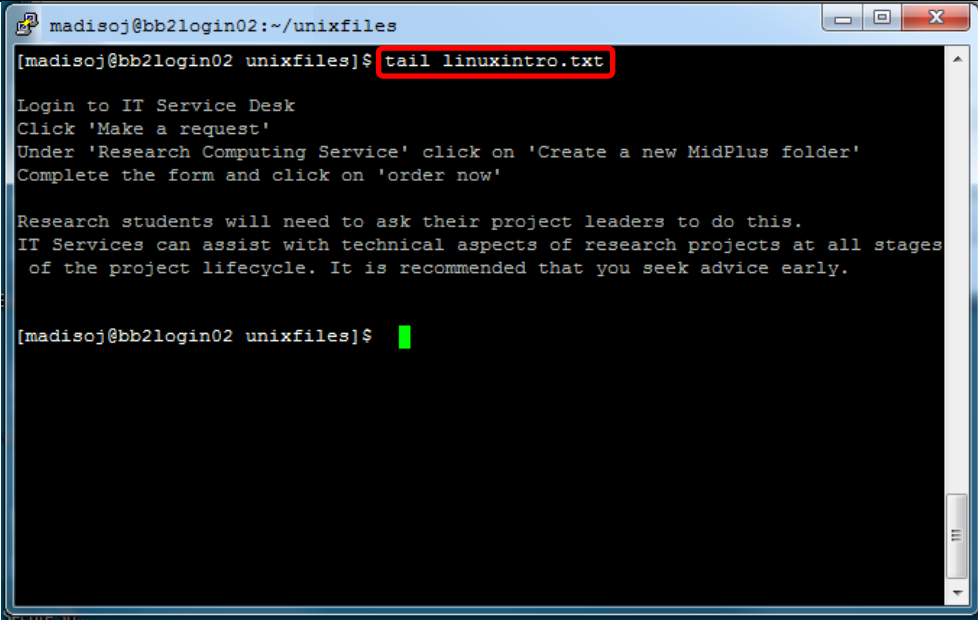
Command	What it means	Example	Results
ls	Displays a list of files within the current directory	<i>ls</i>	
mkdir	Make directory	<i>mkdir unixfiles</i>	
pwd	Present working directory	<i>pwd</i>	

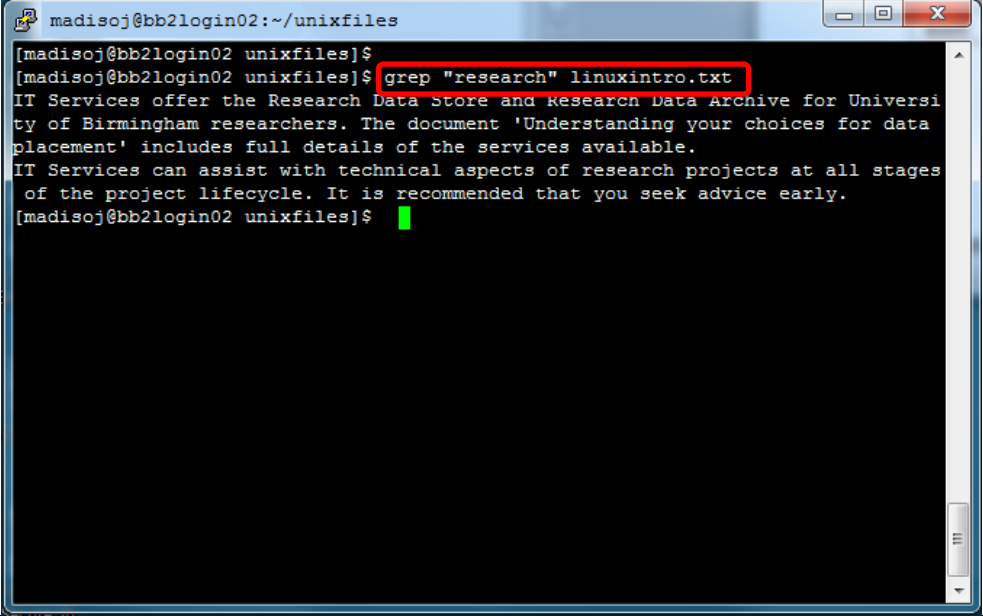
cd	Change directory	<i>cd unixfiles</i>	<pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 ~]\$ mkdir unixfiles [madisoj@bb2login02 ~]\$ ls ls.output nbu testdir testdir2 testdir3 testdir4 unixfiles [madisoj@bb2login02 ~]\$ pwd /gpfs/bb/madisoj [madisoj@bb2login02 ~]\$ cd unixfiles [madisoj@bb2login02 unixfiles]\$ </pre>
rm (remove file) or rmdir (remove directory)	Remove directory	<i>rm file3</i> <i>rmdir unixfiles</i>	<pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 ~]\$ mkdir unixfiles [madisoj@bb2login02 ~]\$ ls ls.output nbu testdir testdir2 testdir3 testdir4 unixfiles [madisoj@bb2login02 ~]\$ pwd /gpfs/bb/madisoj [madisoj@bb2login02 ~]\$ cd unixfiles [madisoj@bb2login02 unixfiles]\$ touch file3 [madisoj@bb2login02 unixfiles]\$ touch file2 [madisoj@bb2login02 unixfiles]\$ touch file1 [madisoj@bb2login02 unixfiles]\$ ls file1 file2 file3 [madisoj@bb2login02 unixfiles]\$ rm file3 [madisoj@bb2login02 unixfiles]\$ ls file1 file2 [madisoj@bb2login02 unixfiles]\$ </pre>
cp	Copy a file	<i>cp file1 file2</i> (this will make a copy of file1 and place it in the current directory with the name file2)	<pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 unixfiles]\$ cp file2 linuxintro.txt [madisoj@bb2login02 unixfiles]\$ ls file1 file2 linuxintro.txt </pre>

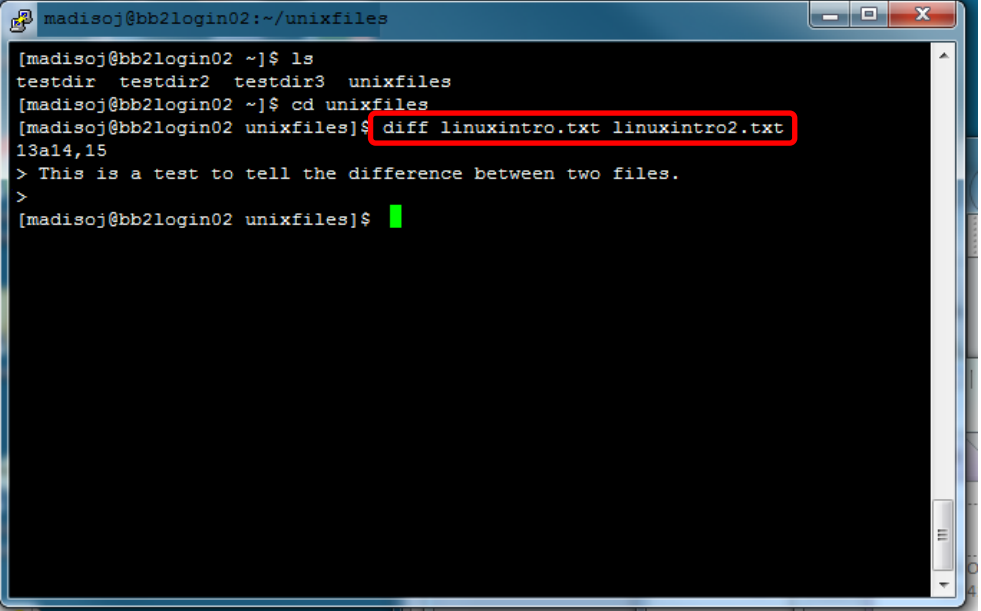
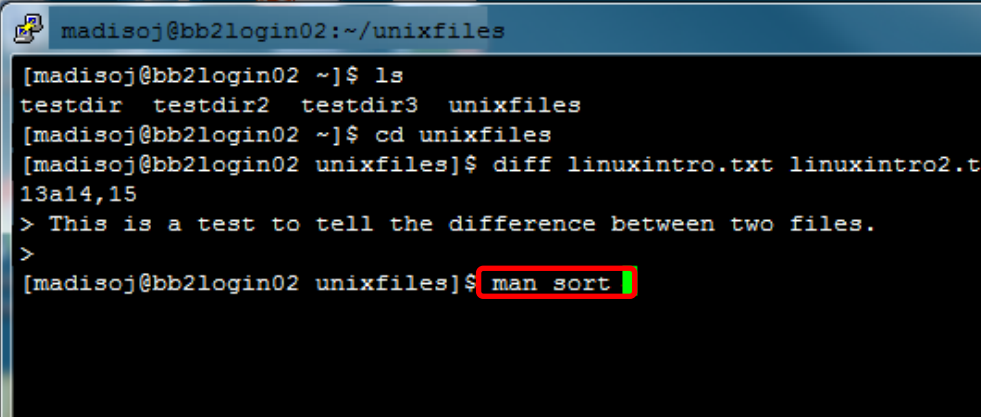
mv	Move a file	<i>mv file1 file2</i> (this will rename file1 to file2)	 <pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 unixfiles]\$ ls file1 file2 linuxintro.txt [madisoj@bb2login02 unixfiles]\$ mv file1 file2 [madisoj@bb2login02 unixfiles]\$ ls file1 file2 [madisoj@bb2login02 unixfiles]\$ </pre>
touch	touch creates new, empty files	<i>touch file3</i>	 <pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 ~]\$ mkdir unixfiles [madisoj@bb2login02 ~]\$ ls ls.output nbu testdir testdir2 testdir3 testdir4 unixfiles [madisoj@bb2login02 ~]\$ pwd /gpfs/bb/madisoj [madisoj@bb2login02 ~]\$ cd unixfiles [madisoj@bb2login02 unixfiles]\$ touch file3 [madisoj@bb2login02 unixfiles]\$ touch file2 [madisoj@bb2login02 unixfiles]\$ touch file1 [madisoj@bb2login02 unixfiles]\$ ls file1 file2 file3 [madisoj@bb2login02 unixfiles]\$ </pre>

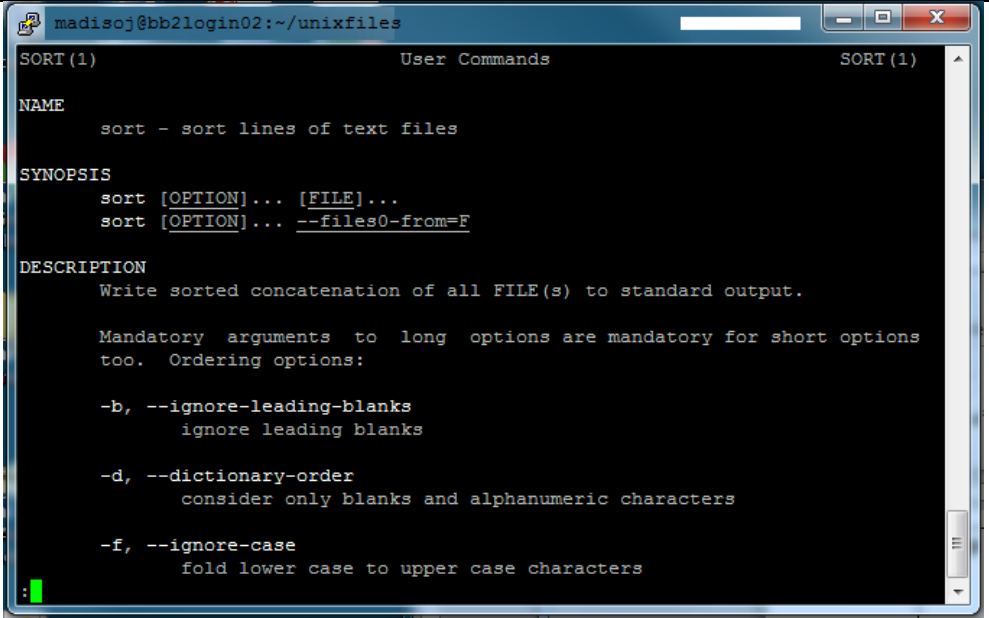
less	less writes the contents of a file to the screen a page at a time	<i>less linuxintro.txt</i> <i>type q to exit</i>	 <p>The screenshot shows a terminal window with the following commands and output:</p> <pre>madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 unixfiles]\$ cp file2 linuxintro.txt [madisoj@bb2login02 unixfiles]\$ ls file1 file2 linuxintro.txt [madisoj@bb2login02 unixfiles]\$ less linuxintro.txt</pre> <p>The output of the <code>less</code> command is displayed on the screen:</p> <pre>For your Data Management Plan, you need to think about the following: What data will you generate as part of your project? Are you using third party data for which you need to check the terms of use? Who should have access to your data? What restrictions to access might you need to have in place? How long will the data need to be kept? How big will your data set(s) be? Are there any ethical considerations (data protection / confidentiality you need to take into account when making access arrangements? Contact - ethics-queries@contacts.bham.ac.uk linuxintro.txt (END)</pre>
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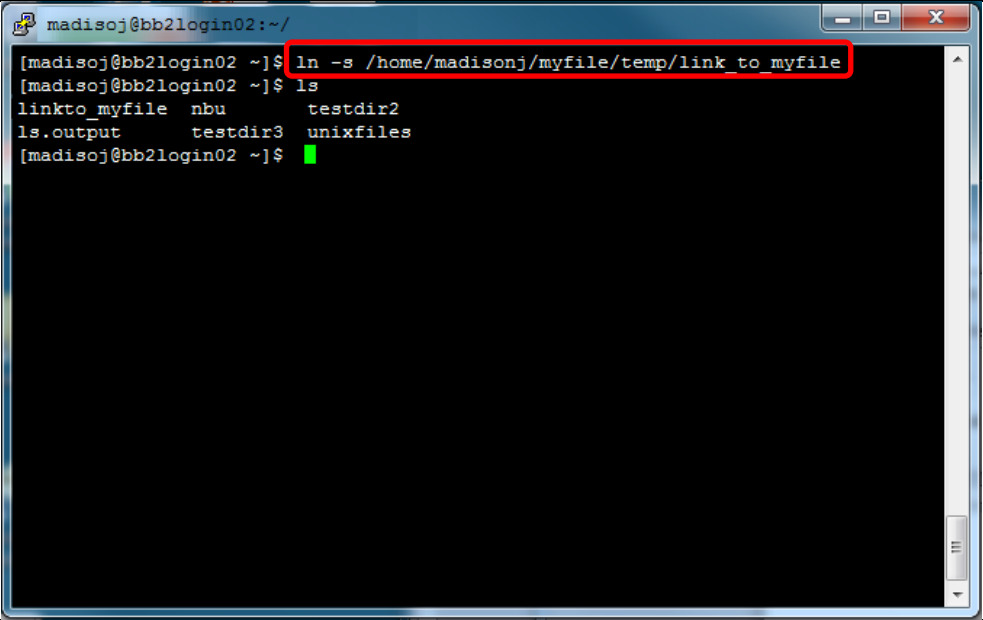
head	head writes the first ten lines of the file to the screen	<i>head linuxintro.txt</i>	 <pre>madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 unixfiles]\$ ls file1 file2 [madisoj@bb2login02 unixfiles]\$ cp file2 linuxintro.txt [madisoj@bb2login02 unixfiles]\$ ls file1 file2 linuxintro.txt [madisoj@bb2login02 unixfiles]\$ less linuxintro.txt [madisoj@bb2login02 unixfiles]\$ head linuxintro.txt For your Data Management Plan, you need to think about the following: What data will yu generate a part of your project? Are you using third party data for which you need to check the terms of use? Who should have access to your data? What restrictions to access might you need to have in place? How long will the data need to be kept? How big will your data set(s) be? Are there any ethical considerations (data protection / confidentiality you need to take into account when making access arrangements? Contact - ethics-queries@ contacts.bham.ac.uk [madisoj@bb2login02 unixfiles]\$</pre>

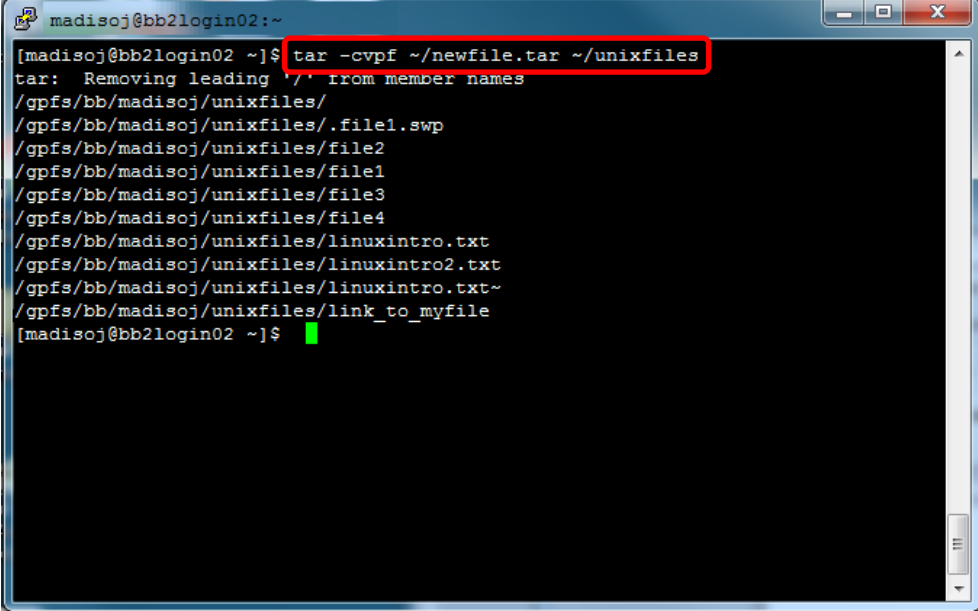
tail	tail writes the last ten lines of the file to the screen	<i>tail linuxintro.txt</i>	 A terminal window titled 'madisoj@bb2login02:~/unixfiles' showing the command 'tail linuxintro.txt' being executed. The output of the command is displayed in a monospaced font: 'Login to IT Service Desk', 'Click 'Make a request'', 'Under 'Research Computing Service' click on 'Create a new MidPlus folder'', 'Complete the form and click on 'order now'', a blank line, 'Research students will need to ask their project leaders to do this.', 'IT Services can assist with technical aspects of research projects at all stages of the project lifecycle. It is recommended that you seek advice early.', and another blank line. The prompt '[madisoj@bb2login02 unixfiles]\$' is visible at the bottom with a green cursor.
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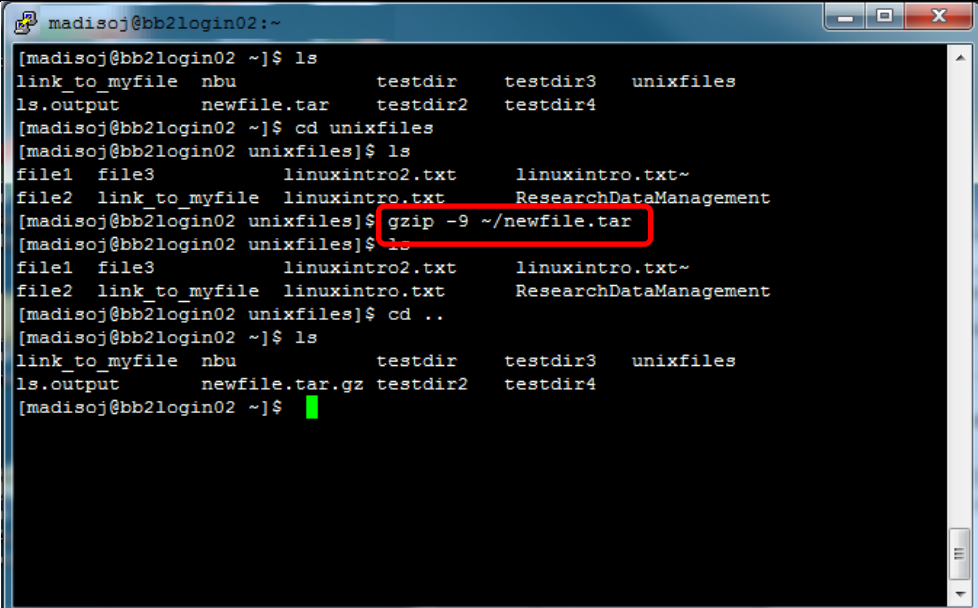
grep	grep (global regular expression print) searches input files for specific words or patterns and print the results	<i>grep "research" linuxintro.txt</i>	 <p>The screenshot shows a terminal window with the following text:</p> <pre>madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 unixfiles]\$ [madisoj@bb2login02 unixfiles]\$ grep "research" linuxintro.txt IT Services offer the Research Data Store and Research Data Archive for University of Birmingham researchers. The document 'Understanding your choices for data placement' includes full details of the services available. IT Services can assist with technical aspects of research projects at all stages of the project lifecycle. It is recommended that you seek advice early. [madisoj@bb2login02 unixfiles]\$</pre>
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<p>diff</p>	<p>diff shows the difference between to files</p>	<p><i>diff /etc/nsswitch.conf ~/nsswitch.conf</i></p>	 <pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 ~]\$ ls testdir testdir2 testdir3 unixfiles [madisoj@bb2login02 ~]\$ cd unixfiles [madisoj@bb2login02 unixfiles]\$ diff linuxintro.txt linuxintro2.txt 13a14,15 > This is a test to tell the difference between two files. > [madisoj@bb2login02 unixfiles]\$ </pre>
<p>man</p>	<p>man will display the on-line manual which explains the options associated with the command</p>	<p><i>man sort</i></p>	 <pre> madisoj@bb2login02:~/unixfiles [madisoj@bb2login02 ~]\$ ls testdir testdir2 testdir3 unixfiles [madisoj@bb2login02 ~]\$ cd unixfiles [madisoj@bb2login02 unixfiles]\$ diff linuxintro.txt linuxintro2.txt 13a14,15 > This is a test to tell the difference between two files. > [madisoj@bb2login02 unixfiles]\$ man sort </pre>

			 <pre>madisoj@bb2login02:~/unixfiles SORT (1) User Commands SORT (1) NAME sort - sort lines of text files SYNOPSIS sort [OPTION]... [FILE]... sort [OPTION]... --files0-from=F DESCRIPTION Write sorted concatenation of all FILE(s) to standard output. Mandatory arguments to long options are mandatory for short options too. Ordering options: -b, --ignore-leading-blanks ignore leading blanks -d, --dictionary-order consider only blanks and alphanumeric characters -f, --ignore-case fold lower case to upper case characters :</pre>
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ln -s	Link creates a soft link or shortcut	<code>ln -s /home/user1/myfile/tmp/link_to_myfile</code>	 A terminal window titled 'madisoj@bb2login02:~/'. The prompt is '[madisoj@bb2login02 ~]\$'. The command 'ln -s /home/madisonj/myfile/tmp/link to myfile' is entered and highlighted with a red box. The prompt changes to '[madisoj@bb2login02 ~]\$ ls'. The output of the ls command is displayed: 'linkto_myfile nbu testdir2', 'ls.output testdir3 unixfiles'. The prompt returns to '[madisoj@bb2login02 ~]\$'.
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tar (traditionally tape archive)	Groups a set of files together into a single file. Similar to zipping a file	<i>tar -cvpf ~/newfile.tar ~/testdir</i>	 <pre>madisoj@bb2login02:~ [madisoj@bb2login02 ~]\$ tar -cvpf ~/newfile.tar ~/unixfiles tar: Removing leading '/' from member names ./gpfs/bb/madisoj/unixfiles/ ./gpfs/bb/madisoj/unixfiles/.file1.swp ./gpfs/bb/madisoj/unixfiles/file2 ./gpfs/bb/madisoj/unixfiles/file1 ./gpfs/bb/madisoj/unixfiles/file3 ./gpfs/bb/madisoj/unixfiles/file4 ./gpfs/bb/madisoj/unixfiles/linuxintro.txt ./gpfs/bb/madisoj/unixfiles/linuxintro2.txt ./gpfs/bb/madisoj/unixfiles/linuxintro.txt~ ./gpfs/bb/madisoj/unixfiles/link_to_myfile [madisoj@bb2login02 ~]\$</pre>
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gzip or bzip2	These are often used to compress files	<i>gzip -9 ~/newfile.tar</i>	 <pre>madisoj@bb2login02:~ [madisoj@bb2login02 ~]\$ ls link_to_myfile nbu testdir testdir3 unixfiles ls.output newfile.tar testdir2 testdir4 [madisoj@bb2login02 ~]\$ cd unixfiles [madisoj@bb2login02 unixfiles]\$ ls file1 file3 linuxintro2.txt linuxintro.txt~ file2 link_to_myfile linuxintro.txt ResearchDataManagement [madisoj@bb2login02 unixfiles]\$ gzip -9 ~/newfile.tar [madisoj@bb2login02 unixfiles]\$ ls file1 file3 linuxintro2.txt linuxintro.txt~ file2 link_to_myfile linuxintro.txt ResearchDataManagement [madisoj@bb2login02 unixfiles]\$ cd .. [madisoj@bb2login02 ~]\$ ls link_to_myfile nbu testdir testdir3 unixfiles ls.output newfile.tar.gz testdir2 testdir4 [madisoj@bb2login02 ~]\$</pre>
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