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<b>Started on</b>	Wednesday, August 3, 2022, 6:48 AM
<b>State</b>	Finished
<b>Completed on</b>	Wednesday, August 3, 2022, 6:52 AM
<b>Time taken</b>	4 mins 6 secs
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<b>Grade</b>	100.00 out of 100.00

<b>Question 1</b> Correct 1.00 points out of 1.00 Flag question	<p><b>1. Text Editing</b></p> <p><b>gedit / TextEdit</b></p> <p>The <code>gedit</code> and <code>TextEdit</code> programs are very basic text editors that we can use in this course for editing simple text data files and computer programs, because they have a nice user friendly interface. Since we will be generating some new files while text editing, let's create a new directory <b>act2</b> inside your <b>groupwork</b> directory. Which of the following commands would guarantee we move into the groupwork directory?</p> <p>Select one:</p> <ul style="list-style-type: none"><li><input type="radio"/> a. <code>mv ~/groupwork</code></li><li><input type="radio"/> b. <code>mv groupwork</code></li><li><input type="radio"/> c. <code>mv ~/groupwork</code></li><li><input type="radio"/> d. <code>cd ~/groupwork</code></li><li><input checked="" type="radio"/> e. <code>cd ~/groupwork</code> ✓</li><li><input type="radio"/> f. <code>cd groupwork</code></li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: <code>cd ~/groupwork</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 2</b> Correct 1.00 points out of 1.00 Flag question	<p>Which of the following commands would create a new directory called <b>act2</b> inside your <b>groupwork</b> directory?</p> <p>Select one:</p> <ul style="list-style-type: none"><li><input type="radio"/> a. <code>make groupwork/act2</code></li><li><input checked="" type="radio"/> b. <code>mkdir act2</code> ✓</li><li><input type="radio"/> c. <code>make act2</code></li><li><input type="radio"/> d. <code>cd act2</code></li><li><input type="radio"/> e. <code>cd groupwork/act2</code></li><li><input type="radio"/> f. <code>mkdir groupwork/act2</code></li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: <code>mkdir act2</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 3</b> Correct 1.00 points out of 1.00 Flag question	<p>After making the <b>act2</b> directory, what command should you type to move inside of it?</p> <p>Answer: <code>cd act2</code> ✓</p> <p><a href="#">Check</a></p> <p>Correct. Now make sure you run this command to ensure you are in the act2 directory.</p> <p>The correct answer is: <code>cd act2</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 4</b> Correct 1.00 points out of 1.00 Flag question	<p>Now we will begin using a text editor. I will ask you to use the <code>gedit</code> program for this purpose throughout the rest of the tutorials assuming that you are logged into the OpenSARlab (OSL) Linux workspace.</p> <p>To begin using <code>gedit</code> in your <b>act2</b> directory, type</p> <pre>(iris) <code>junw@osl:~/groupwork/act2\$ gedit newfile.txt &amp;</code></pre> <p>NOTE: the <code>&amp;</code> symbol is used to run a command in the background. This means that the command prompt will return immediately after you run the program, no matter how long it takes for that command to complete. In this case, if you were to run <code>gedit</code> without the <code>&amp;</code>, you could not run any additional commands until you exit from <code>gedit</code>. This is because UNIX/Linux assumes that when you run a command, you want it in the foreground and that you don't want to do anything else until it completes. If you are ok with a program working in the background such that you can continue running other commands, we use the <code>&amp;</code> symbol to let the UNIX/Linux system know the command should go to the background.</p> <p>After a few moments, you should see a window popup on your desktop.</p> <p>This has opened a new file called <code>newfile.txt</code> and <code>gedit</code> is ready to start taking your text input.</p> <p>Once <code>gedit</code> is open, go ahead and type</p> <pre>The quick brown fox jumped over the lazy dog.</pre> <p>If you make a mistake, you can use either the arrow keys or the mouse to reposition your cursor.</p> <p>Note that the font may be too small to see clearly. If you'd like to make the text larger, go ahead and click the <b>gear</b> icon next to <b>Save</b> (in the top row of the editor), click <b>Preferences</b>, followed by <b>Font &amp; Colors</b>. Uncheck the checkbox next to <b>"Use the system fixed font width (Monospace 11)"</b>, click the button next to <b>"Editor font"</b>, and toggle the font size until it is large enough to see clearly.</p> <p>When you have finished typing, you can save the file by clicking <b>Save</b>.</p> <p>Did the text file successfully save when you clicked Save?</p> <p>Select one:</p> <ul style="list-style-type: none"><li><input type="radio"/> a. No</li><li><input checked="" type="radio"/> b. Yes ✓</li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: Yes <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 5</b> Correct 1.00 points out of 1.00 Flag question	<p>Now click on the terminal window again and hit <b>Enter</b> to activate it. You might see what looks like warnings or error messages in the terminal. Don't worry about those! Just hit <b>Enter</b> to exit them.</p> <p>Type the following command to check if the file has the right number of characters in it</p> <pre>(iris) <code>junw@osl:~/groupwork/act2\$ wc -m newfile.txt</code></pre> <p>What is the result of this command?</p> <p>Select one:</p> <ul style="list-style-type: none"><li><input type="radio"/> a. 0</li><li><input checked="" type="radio"/> b. 46 ✓</li><li><input type="radio"/> c. wc: newfile.txt: No such file or directory</li><li><input type="radio"/> d. 48</li><li><input type="radio"/> e. 9</li><li><input type="radio"/> f. 3</li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: 46 <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 6</b> Correct 1.00 points out of 1.00 Flag question	<p>When you are done editing and saving the file you can exit <code>gedit</code> by just exiting that window.</p> <p>Once you return to the command line, what command will you type to reopen this file in <code>gedit</code>?</p> <p>Answer: <code>gedit newfile.txt &amp;</code> ✓</p> <p><a href="#">Check</a></p> <p>The correct answer is: <code>gedit newfile.txt &amp;</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 7</b> Correct 1.00 points out of 1.00 Flag question	<p>There are a number of other useful commands at the top of the <code>gedit</code> file and you should explore them a bit now.</p> <p>Where is the command to Find specific text in <code>gedit</code>?</p> <p>Select one:</p> <ul style="list-style-type: none"><li><input checked="" type="radio"/> a. In the dropdown menu that appears after clicking the gear icon (next to Save) ✓ This is where the Find command is for gedit.</li><li><input type="radio"/> b. In the new window that appears after clicking Open</li><li><input type="radio"/> c. In the dropdown menu next to Open</li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: In the dropdown menu that appears after clicking the gear icon (next to Save) <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 8</b> Correct 1.00 points out of 1.00 Flag question	<p>Close the <code>newfile.txt</code> file, and open the <code>science.txt</code> file in your <b>act1</b> for editing, with the following:</p> <pre>(iris) <code>junw@osl:~/groupwork/act2\$ gedit ~/groupwork/act1/science.txt &amp;</code></pre> <p>Then use the <b>Find</b> and <b>Replace</b> commands within <code>gedit</code> to find the word <code>asteroids</code>, change it to <code>meteoroids</code>, and then save the edited file as <code>science-new.txt</code> in your <b>act2</b> directory.</p> <p>Now, exit <code>gedit</code>. As a brief review of previous material, now type in <code>ls</code>. What files are present in the <b>act2</b> directory?</p> <p>Select one or more:</p> <ul style="list-style-type: none"><li><input type="checkbox"/> a. <code>newfile</code></li><li><input checked="" type="checkbox"/> b. <code>newfile.txt</code> ✓</li><li><input type="checkbox"/> c. <code>groupwork</code></li><li><input checked="" type="checkbox"/> d. <code>science-new.txt</code> ✓</li><li><input type="checkbox"/> e. <code>act2</code></li><li><input type="checkbox"/> f. <code>science.txt</code></li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: <code>science-new.txt</code>, <code>newfile.txt</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 9</b> Correct 1.00 points out of 1.00 Flag question	<p>What is the result of typing the following command?</p> <pre>(iris) <code>junw@osl:~/groupwork/act2\$ grep -c meteoroids ~/groupwork/act2/science-new.txt</code></pre> <p>Select one:</p> <ul style="list-style-type: none"><li><input checked="" type="radio"/> a. 1 ✓</li><li><input type="radio"/> b. <code>grep: meteoroids: No such file or directory</code></li><li><input type="radio"/> c. <code>grep: ~/groupwork/act2/science.txt: No such file or directory</code></li><li><input type="radio"/> d. 0</li><li><input type="radio"/> e. 2</li><li><input type="radio"/> f. <code>grep: ~/groupwork/act2/science-new.txt: No such file or directory</code></li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: 1 <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 10</b> Correct 1.00 points out of 1.00 Flag question	<p><b>2. What is a script</b></p> <p>To a Linux user, a script is a list of commands that are to be run in that particular order. This list of commands is stored in a file, which can be edited to change the order or parameters of how the commands run. The advantages to using a script are often found when you need to run a particular set of commands more than once, or if you just want to make sure you have time to think through the logic of what you need to do to make sure you order your commands correctly. Writing a script is really the essence of computer programming.</p> <p><b>Shell Scripting</b></p> <p>The real nice thing about shell scripting is that you don't need to learn a computer programming language like C++ or Fortran. Shell scripting just takes the command you would normally run at the command line and puts them into a file to run them together at once. It helps a new programmer to be able to see that when you are doing shell scripting, each command could be run on its own at the command line, and this turns out to be an excellent way to test your shell scripts if they don't produce the desired result.</p> <p>We will be working in your <b>act2</b> directory again for this tutorial, so which command will ensure that you are in the <b>act2</b> directory?</p> <p>Select one:</p> <ul style="list-style-type: none"><li><input type="radio"/> a. <code>cd act2</code></li><li><input type="radio"/> b. <code>cd ~/groupwork/act2</code></li><li><input type="radio"/> c. <code>ls groupwork/act2</code></li><li><input type="radio"/> d. <code>ls ~/groupwork/act2</code></li><li><input type="radio"/> e. <code>ls ~/groupwork/act2</code></li><li><input checked="" type="radio"/> f. <code>cd ~/groupwork/act2</code> ✓</li></ul> <p><a href="#">Check</a></p> <p>The correct answer is: <code>cd ~/groupwork/act2</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 11</b> Correct 1.00 points out of 1.00 Flag question	<p><b>3. How to make a script</b></p> <p>You should begin making your first script file by opening a new file named <b>first.csh</b> with <code>gedit</code>. What is the correct command to do that?</p> <p>Answer: <code>gedit first.csh &amp;</code> ✓</p> <p><a href="#">Check</a></p> <p>The correct answer is: <code>gedit first.csh &amp;</code> <b>Correct</b> Marks for this submission: 1.00/1.00.</p>
<b>Question 12</b> Correct 1.00 points out of 1.00 Flag question	<p>We begin the file by writing the first line that tells which type of shell we are using</p> <pre>#!/bin/csh</pre> <p>and then it is a good idea to add some comments about this script. We can do that by adding lines that have the <code>#</code> character at the beginning of the line. This tells the shell to ignore the rest of the characters on that line. Go ahead and add these lines to your script</p> <pre># This is my first script.</pre>

# It goes to a directory, prints the location, lists the files present, and counts the number of files.

#

Which of the following commands will be needed for this script to do what these comments say?

Select one or more:

- ☒ a. pwd ✓ 1 of 4 correct answers
- ☐ b. mv
- ☒ c. wc ✓ 1 of 4 correct answers
- ☒ d. cd ✓ 1 of 4 correct answers
- ☒ e. ls ✓ 1 of 4 correct answers

Check

The correct answer is: cd, pwd, ls, wc

Correct

Marks for this submission: 1.00/1.00.

#### Question 13

Correct

1.00 points out of 1.00

Flag question

In order for us to do what the script says it will, we need to use some commands we have learned already. You can do that by adding the following lines

```
cd ~/groupwork/act1/
pwd
ls
ls | wc -l
```

Note that wc option is the letter l not the number 1.

What is the order of events that will happen when we execute this script?

- change to the directory 1 ✓ ✓
- print the directory name 2 ✓ ✓
- list the contents of the directory 3 ✓ ✓
- count the number of files in the directory 4 ✓ ✓

Check

The correct answer is: change to the directory – 1, print the directory name – 2, list the contents of the directory – 3, count the number of files in the directory – 4

Correct

Marks for this submission: 1.00/1.00.

#### Question 14

Correct

1.00 points out of 1.00

Flag question

#### Shell variables

We can use a shell variable to make the first.csh script more easy to understand and adjust. Shell variables are like the memory key on a calculator in that they hold onto a piece of information for you. Shell variables are a bit more complex because they can store either an integer (a whole number) or a string (any mixture of characters). In this case we will use a variable to store the name of the directory we are changing to. Shell variables are created using the set command. After the comments at the top of your script (after line 5), insert the following line

```
set directory=~/groupwork/act1
```

Then you will need to change the cd command you already entered with that location to be

```
cd $directory
```

Notice how we use the \$ character to indicate that d i r e c t o r y is a shell variable and that we want the information stored in that variable when we perform the cd command.

Note: Shell variables are only stored within the script, so they can only be recalled while the script is running. Once the script finished running the information stored in those variables is lost.

Based on how this variable was set up, which of the following commands would list the contents of the act1 directory?

Select one:

- ☒ a. ls \$directory ✓
- ☐ b. ls \$directory
- ☐ c. ls ~/\$directory
- ☐ d. ls directory

Check

The correct answer is: ls \$directory

Correct

Marks for this submission: 1.00/1.00.

#### Question 15

Correct

1.00 points out of 1.00

Flag question

#### 4. How to run a script

If you feel like your script is ready to run, and it's always a good idea to check it over for any mistakes before running it, and you need to make sure to save the script in `gedit` before trying to run it. You can exit `gedit` if you want, or you can just save the file. If you don't exit, it allows you to make edits later without reopening the file, which is often what we need to do if there is a problem with our script or we want to add additional commands. The only issue is that you need to remember to quit all of your `gedit` windows when you log out.

Once the script file is saved, you should click on your command line window to be able to enter text at the command line. If you do exit `gedit`, what command would you run to edit your script again?

Answer: `gedit first.csh &`

Check

The correct answer is: gedit first.csh &

Correct

Marks for this submission: 1.00/1.00.

#### Question 16

Correct

1.00 points out of 1.00

Flag question

#### chmod

Next we need to indicate that we want to execute the commands in this script, so we need to make this file executable. To do this we make a modification to the file type with the `chmod` command. This command has a variety of options, but for this application, you can use the following simple approach:

```
(iris) jupyter-your_username:~/groupwork/act2> chmod +x first.csh
```

#### Execution

At this point, your script should be ready to run. You can execute the script and the command therein by typing the name of the script on the command line.

```
(iris) jupyter-your_username:~/groupwork/act2> ./first.csh
```

Your script should produce a variety of output to the command line window, including the directory path, the list of files in your `act1` directory, and then it should count the number of files in that directory.

Which of the following files were listed?

Select one or more:

- ☒ a. science.txt ✓ 1 of 4 correct answers
- ☒ b. names.txt ✓ 1 of 4 correct answers
- ☒ c. biglist ✓ 1 of 4 correct answers
- ☒ d. list1 ✓ 1 of 4 correct answers
- ☐ e. act2

Check

The correct answer is: biglist, list1, names.txt, science.txt

Correct

Marks for this submission: 1.00/1.00.

#### Question 17

Correct

1.00 points out of 1.00

Flag question

About how many files did it count?

Select one:

- ☐ a. 9
- ☐ b. 16
- ☐ c. 2
- ☐ d. 0
- ☐ e. 8
- ☒ f. 7 ✓
- ☐ g. 1

Check

The correct answer is: 9

Correct

Marks for this submission: 1.00/1.00.

#### Question 18

Correct

1.00 points out of 1.00

Flag question

How would you run the script and then direct the output to a file called `first.out`?

Select one:

- ☒ a. ./first.csh > first.out ✓
- ☐ b. first.out < first.csh
- ☐ c. first.out | first.csh
- ☐ d. ./first.csh | first.out
- ☐ e. ./first.csh < first.out
- ☐ f. first.out > first.csh

Check

The correct answer is: ./first.csh > first.out

Correct

Marks for this submission: 1.00/1.00.

#### Question 19

Correct

1.00 points out of 1.00

Flag question

If you enter the command from Question 18 twice, what error do you get?

Be careful with your answer, as I am looking for the exact text of the error.

Answer: `first.out: File exists.`

Check

The correct answer is: first.out: File exists.

Correct

Marks for this submission: 1.00/1.00.

#### Question 20

Correct

1.00 points out of 1.00

Flag question

You can overcome this error by adding a `|` symbol immediately after the `>` symbol, which tells the Linux system that you want the output to be sent to a file and it should "lobber" any previous file by that name if it exists. To help remember this "lobber" symbol, envision that the `|` is a baseball bat destroying the existing file.

So how would you run the script and overwrite the existing `first.out` file?

Select one:

- ☐ a. first.out > first.csh |
- ☐ b. first.out |< first.csh
- ☒ c. ./first.csh >| first.out ✓
- ☐ d. ./first.csh <| first.out |
- ☐ e. ./first.csh | first.out
- ☐ f. first.out | first.csh

Check

The correct answer is: ./first.csh >| first.out

Correct

Marks for this submission: 1.00/1.00.

#### Question 21

Correct

1.00 points out of 1.00

Flag question

Now adjust your script to change the `directory` variable to `~/groupwork` and then when you run the script direct the output to a file called `first.groupwork.out`. Which commands could you use to see the information now stored inside the `first.groupwork.out` file?

Select one or more:

- ☒ a. gedit ✓ 1 of 3 correct answers
- ☒ b. cat ✓ 1 of 3 correct answers
- ☒ c. more ✓ 1 of 3 correct answers
- ☐ d. cd
- ☐ e. ls

Check

The correct answer is: more, cat, gedit

Correct

Marks for this submission: 1.00/1.00.

#### Question 22

Correct

1.00 points out of 1.00

Flag question

Which of the following files were listed in the `first.groupwork.out` file?

Select one or more:

- ☒ a. act2 ✓ Correct
- ☐ b. list1
- ☐ c. biglist
- ☐ d. names.txt
- ☐ e. science.txt

Check

The correct answer is: act2

Correct

Marks for this submission: 1.00/1.00.

#### Question 23

Correct

1.00 points out of 1.00

Flag question

About how many files were counted at the end of the `first.groupwork.out` file?

Select one:

- ☐ a. 16
- ☐ b. 0
- ☐ c. 1
- ☐ d. 9
- ☒ e. 2 ✓

Check

The correct answer is: 2

Correct

Marks for this submission: 1.00/1.00.

Finish review

