



CSE 313 – Midterm

9 November 2019

Name Surname:

ID:

Q1 (20)	Q2 (15)	Q3 (25)	Q4 (20)	Q5 (20)	Total (100)

Rules:

- Lecture notes, text books, cheat sheets or any similar materials **CAN** be used during the exam.
- All electronic devices (including cell phones) must be **switched off** during the exam. In case you use an electronic device, your exam booklet will be taken and your exam score will be 0.
- The duration of the exam is **120 minutes**, starting at **11.30** and ending at **13.30**.

Instructions:

- Read each problem carefully.
- If you need extra paper, please notify the instructor.
- This exam has 5 sections. Please make sure that all pages are included in your booklet.

Q1 Age of Goog-Ultron (20 points)

Define/Explain the following terms.

1. Primary Group
2. Supplementary Group
3. Shell
4. Terminal
5. vim
6. umask
7. Process
8. Parent and Child Process

Q2 The Incredible Bulk...File Creation (15 points)

We want to create files for films and TV shows in the MCU. We also want to organize them into directories. Write a list of commands that will create the following directories and files (you can just create blank files) and place them into the indicated directories.

Directories: Inside of your user's Documents directory there must be a directory called "MCU". Inside of this directory, you must create directories named "Films" and "TV".

Files: Inside of the Films directory, create 6 files of the format "IronManX.mov" and "ThorX.mov" where X is replaced with the numbers 1 through 3.

Inside of the TV directory, create a total of 48 files with names "AgentsOfShield_seasonX_episodeY.mov" with X replaced with the numbers 1 through 6 and Y replaced with the numbers 1 through 8.

Q3 Infini-tee Commands (25 points)

- a. Describe the three main channels used by processes.
- b. List and explain the different redirection operators.
- c. How does a pipeline operate?
- d. What does the tee command do?
- e. Give an example **not given in the text** that uses redirection or a pipeline and explain what is happening in your example.

Q4 Guardians of the Directories (20 points)

Below is given a list of users and their groups. And a list of files that have been created within the MCU directory.

Users and their groups:

thor	thor, asgard, avengers
loki	loki, asgard, villains
hulk	hulk, avengers
pquill	pquill, guardians

File attributes:

drwxrwxr-x	hulk	avengers	mcu
-rw-r--r--	pquill	pquill	gamora
--wxrw--w-	tstark	avengers	starktower
-rwxrw----	loki	villains	evilPlans
-r--r--r--	thor	asgard	disney

1. Write the commands to create two (2) of these users and two (2) groups and to assign the users to their respective groups.
2. Answer the following based on the file attributes given
 - a. List the users that can view file “starktower”.
 - b. List the users that can edit the file “evilPlans”.
 - c. How could we change the permissions to allow anyone in the “villains” group to execute the “evilPlans” file?
 - d. List the users that can view a list of all files in the “mcu” directory.
 - e. List users that can delete the file “evilPlans”.

Q5 The Walking Dead (20 points)

- a. How can we view current processes running? What command would we use?

- b. What happens to a parent process when a child is executing?

- c. What happens to a child process when it is completed executing and exits? What is the term used to describe this process?

- d. What is the first thing a parent process does upon having control returned and “waking up”?

- e. What process state will not be seen in process-listing utilities? Why?