

M01: Introduction to Operating Systems

1st Training Unit: Installing, configuring and exploiting a computer system

NAME		DATE 13 / 06 / 2017	MARK:
SUBJECT	ASIX1 - M01UF1	AC. YEAR 2016 - 2017	

Take screenshots of your answers. Copy and paste each screenshot behind the question you are answering.

1) Working on your **Debian** machine: Start a text editor **on your terminal** and copy the following script:

```
#!/bin/bash
clear
echo "13-6-17"
ID=$(id -u)
echo "USER INFORMATION"
echo "User name --> $USER"
echo "User identification --> $ID"
echo "Personal folder --> $HOME"
exit 0
```

Save the script in a file with the following specifications: a) Folder: home folder, b) File Name: extr.sh, c) Permissions: owner --> read,write,execute // group--> read // other--> none. Run extr.sh. (1p)

- 2) Working on your **Debian** machine and using the terminal:
- a) Create a folder called extr in your personal folder
- b) Copy all files in the /usr/bin directory that begin with the character z inside extr.
- c) Pack all files in the extr directory in a new file called zfiles.tar located inside the extr directory.
- d) Compress zfiles.tar. (1p)
- 3) Working on your **Debian** machine **and using the terminal**: Create a new **group** called **Icar** whose **gid** is equal to **2178**. Show clearly the entry for the new group. (1p)
- 4) Working on your **Debian** machine **and using the terminal**: Create a new **user** called **Icar**, whose default group is **Icar**, whose home directory is **/home/Icar**, whose shell is **/bin/bash**, whose password is **clotfje2718** and a **uid** equal to **2718**. Show clearly the entry for the new user. If you have not answered question 3, add **Icar** to the **users** group. (1p)
- 5) Working on your **Debian** machine and **using the terminal**: create a folder called **tu1Ext** in your personal folder. Add an ACL rule (using the symbolic mode) for the folder **tu1Ext** that gives to **Icar** the following permissions: **read** and **write**. Add another ACL (using the numeric mode) for the folder **tu1Ext** that gives to the group **news** the following permissions: **read**, **write** and **execute**. Display the **tu1Ext**'s ACL. (1p)
- **6)** Working on your **Debian** machine and **using the terminal**:
- a) Start a new instance of **geanyt** with a **nice** value equal to **2**. Check and show me clearly that **geany** is running with the desired nice value.
- b) Change the **nice** value of <u>process started in the previous question</u> to a value equal to **7**. What has happened? Provide an explanation for what is happening in this particular case when you try to change the nice number.

 (1p)

- 7- Working on **Debian** and using a terminal:
- 7.1) Using a SysVinit command-line tool: Stop the syslog server.
- **7.2)** Using a **SysVinit** command-line tool: **Show** the **rsyslog** server **status**.
- **7.3)** Using a **SySVinit** command-line tool, remove **rsyslog** as service started by the computer during the boot process.
- 7.4) Show that cron has been removed from the list of services started during the computer boot process. (1p)
- 8) Working on your **Debian** machine and **using the terminal**: Show me clearly the **IP address** of your **computer**, the **IP address** of your **router** and the **IP addresses** of your **DNS servers**. (1p)
- 9) Working on your **Debian** machine:
- a) Add two new hard disks with the following characteristicis: (Don't take screenshots)

First hard disk:	Second hard disk:
Hard drive file: VDI	Hard drive file: VDI
Dymamically allocated	Dymamically allocated
Name: dd1	Name: dd2
Size: 5GB	Size: 5 GB
Attached to SATA1	Attached to SATA2

b) Run fdisk and

- * Delete any partition of the SATA1 and SATA2 hard drives.
- * Create one single primary partition for the full size of the SATA1 and SATA2 hard drives.
- * Change the partition type to **8e Linux LVM**.
- c) Declare partitions created in the previous section as LVM physical volumes
- d) Create a volume group called vg4 made of the LVM physical volumes declared in section c)
- e) Create a 8GB logical volume called logvol4 in the volume group previously created.
- f) Show information about the LVM logical volume **logvol4**.
- 10) Working on your **Debian** machine and using a terminal:
- a) Format the logical volume logvol4 created in the previous question. The format will be ext4.
- b) Mount logvol4 on a mount point called /media/logvol4 (if /media/logvol4 does not exist then, create it). Check that logvol4 has been mounted. (1p)

- **NOTE 1:** You must take screenshots with an applications installed on your virtual machine.
- **NOTE 2:** You **can not** become the **root** user to answer any question. Questions answered with the help of root user will be graded with 0 points.
- **NOTE 3:** If you answer any question running a command with the priveleges of the root user and you do not need it, the answer will be graded with 0 points.

GENERAL CONDITIONS

- a) Save your report as an **ODT** file with the following filename: asix1_surname_name_m01tu01extr.odt (where cognom means you real surname and name means your real name).
- **b)** Save you report as an **PDF** file with the following filename: asix1_surname_name_m01tu01extr.pdf (where cognom means you real surname and name means your real name).
- c) Send both files attached to an e-mail to cf@collados.org. Reports send to the wrong e-mail address could be no graded. The subject for the mail will be: asix1_surname_name_m01tu01extr.

(1p)