CENTRE ESPECÍFIC
D´EDUCACIÓ A DISTÀNCIA DE
LA COMUNITAT VALENCIANA

UT 12.
INTRODUCTION TO SHELL SCRIPTING
Activities

Computer Systems
CFGS DAW / DAM

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Nomenclature

Throughout this unit different symbols will be used to distinguish important elements within the content. These symbols are:

 Important

 Attention

 Interesting

UT 12. Introduction to shell scripting

Activities

In these activities, you will be writing code for the bash shell. If you don't have it installed in your system you will need to use a Docker container or a virtual machine.

0. Exercise 0

Write and run a script that outputs `Hello, world!` when executed.

1. Exercise 1

You have a variable `A_VAR="this   is a var"` (run this code for setting it in your shell)

Write sentences using that variable that outputs:

1. `this is a var`
2. `"this is a var"`
3. `this   is a var`
4. `"this   is a var"`
5. `The variable A_VAR has the value this   is a var`
6. `The variable A_VAR has the value this is a var`
7. `The variable $A_VAR has the value this is a var`
8. `The variable $A_VAR has the value this   is a var`
9. `Today is mar 25 and the variable $A_VAR has the value this   is a var` (the command should print the current date)

2. Exercise 2

Complete this script:

```
#! /usr/bin/env bash

FILENAME=/tmp/a_file
```

Generate scripts by completing the previous one that do the following:

1. Write `The file exists` or `The file is missing` depending on whether the file exists or not.
2. Write `The file exists` if the file exists and `The file is not empty` if it's not empty.
3. Write `The file exists and it's empty`, `The file exists and it's not empty` or `The file is missing` depending on the case.

4. Write `The file exists` if the file exists, `An alternative is available` if a file with the same name plus `_alternative` exists (e.g. `/tmp/a_file_alternative`) and `The file is missing` if the file and the alternative don't exist

3. Exercise 3

You can read input from the user with:

```
read VAR_NAME
```

After that, `VAR_NAME` will have the text entered by the user

Write a script that presents a user a list of options and reads an option:

```
- Press I for increment
- Press S for subtraction
- Press D for division
Enter your option:
```

The user must enter one of the options, either in upper or lower case letters.

- If the user enters increment, the program will ask for a number and it will print the number increased by one
- If the user enters subtraction, the program will ask for two numbers and will print the first number minus the second one
- If the user enters division, it will output the integer division of the first number by the second one.

The script will do it only once per execution.