UT 12.
INTRODUCTION TO SHELL SCRIPTING
Activities - Solutions

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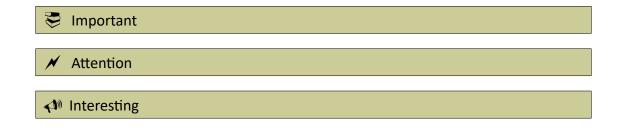## License

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

```
#! /usr/bin/env bash
echo "Hello, world!"
```

Remember to `chmod ug+x` the file. Execute it with `./exercise_0.sh`

1. EXERCISE 1

There are more valid commands, but those are probably the simplest versions:

1. `echo $A_VAR`

2. ` echo \"$A_VAR\"`, or `echo '"'$A_VAR'"'`

3. `echo "$A_VAR"`

4. `echo \""$A_VAR"\" or echo '"'"$A_VAR"'"'`

5. `echo "The variable A_VAR has the value $A_VAR"`

6. `echo The variable A_VAR has the value $A_VAR`

7. `echo The variable '$A_VAR' has the value $A_VAR`

8. `echo The variable '$A_VAR' has the value "$A_VAR"`

9. `echo Today is $(date +"%b %e") and the variable '$A_VAR' has the value "$A_VAR"`

2. EXERCISE 2

Part 1

```
if [ -e "$FILENAME" ]; then
  echo "The file exists"
else
  echo "The file is missing"
fi
```

Part 2

```
if [ -e "$FILENAME" ]; then
  echo "The file exists"
fi

if [ -s "$FILENAME" ]; then
```

```
    echo "The file is not empty"
fi
```

Part 3

```
if [ -e "$FILENAME" ]; then
  if [ -s "$FILENAME" ]; then
    echo "The file exists and it's not empty"
  else
    echo "The file exists and it's empty"
  fi
else
  echo "The file is missing"
fi
```

Part 4

```
if [ -e "$FILENAME" ]; then
  echo "The file exists"
elif [ -e "${FILENAME}_alternative" ]; then
  echo "An alternative is available"
else
  echo "The file is missing"
fi
```

3. EXERCISE 3

You can also use `read -p "Enter something: " VARIABLE` to avoid the `echo` sentences:

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

echo "Press I for increment"
echo "Press S for subtraction"
echo "Press D for division"
echo "Enter your option: "
read option

case "$option" in
  i|I)
    echo "Enter a number: "
    read num
    echo "$((num+1))"
    ;;
  s|S)
    echo "Enter the first number: "
    read num1
    echo "Enter the second number: "
    read num2
    echo "$((num1-num2))"
    ;;
  d|D)
    echo "Enter the first number: "
    read num1
    echo "Enter the second number: "
    read num2
    echo "$((num1/num2))"
```

```
      ;;
   *)
      echo "Invalid option"
      ;;
esac
```