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<> Code

Issues

Pull requests

Actions

Projects

Wiki

Security



Linux_Lab / Assignments / LAB2.md



boa3444 Update LAB2.md

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81 lines (66 loc) · 2.02 KB

LAB2 : Script Execution & Explanation

Objective: Understand how existing scripts in repo work

Script that I chose : array_length.sh

Line-by-Line EXPLANATION:

```
#!/bin/bash
```



- **Shebang line:** Specifies that the script should be run using the Bash shell.

```
number=(0 9 8 7 6)
```



- **Array declaration:** Creates an indexed array named `number` with five integer elements.

```
length="${#number[@]}"
```



- **Length calculation and output:**
 - `${number[@]}` accesses all elements of the array.
 - `${#number[@]}` returns the total number of elements.

```
echo "$length"
```



- **Printing the variable `length`**

- `echo` prints the result: `5` .

CODE SNIPPET (with output):

```
vboxuser@ubuntu:~/Documents/Linux_Lab/Arrays$ cat arrays_length.sh
#!/bin/bash

numbers=(0 9 8 7 6)
length="${#numbers[@]}"
echo $length
vboxuser@ubuntu:~/Documents/Linux_Lab/Arrays$ ./arrays_length.sh
5
vboxuser@ubuntu:~/Documents/Linux_Lab/Arrays$
```

Script that I chose : `print_with_range.sh`

Line-by-Line EXPLANATION:

```
#!/bin/bash
```



- **Shebang line:** Tells the system to execute the script using the Bash shell.

```
for i in {0..7}
```



- **Loop initialization:** Starts a `for` loop that iterates over the numbers 1 through 5 using brace expansion `{1..5}` .

```
do
```



- **Loop body begins:** Marks the start of the commands to be executed in each iteration.

```
echo "Number: $i"
```



- **Output statement:** Prints the current value of `i` with the label `"Count:"` .

```
done
```



- **Loop body ends:** Signals the end of the `for` loop.

CODE SNIPPET (with output):

```
vboxuser@ubuntu:~/Documents/Linux_Lab/Arrays$ cat range.sh
#!/bin/bash

for i in {0..7}
do echo "Number: $i"
done

vboxuser@ubuntu:~/Documents/Linux_Lab/Arrays$ ./range.sh
Number: 0
Number: 1
Number: 2
Number: 3
Number: 4
Number: 5
Number: 6
Number: 7
vboxuser@ubuntu:~/Documents/Linux_Lab/Arrays$
```

Extra Questions:

1.What is the purpose of `#!/bin/bash` at the top of a script?

Answer:

- The line `#!/bin/bash` is called a **shebang**.
- It tells the system to execute the script using the Bash shell, ensuring consistent behavior across environments.

2. How do you make a script executable?

Answer:

[Linux_Lab](#) / [Assignments](#) / [LAB2.md](#)

[↑ Top](#)

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