

Bash Practice Questions for Chapter 7: Decision Making With If Else and Case Statements

The [seventh chapter](#) of the [Bash Beginner Series on Linux Handbook](#) focuses about using if-else, nested if else and case statements in bash scripts. These practice questions will help you practice what you learned in this chapter.

Exercise 1: +ve or -ve

Write a bash shell script that checks whether the provided number is +ve or -ve.

Difficulty level: Easy

Hint: 0 is considered +ve in this situation even though it is technically a non-negative number.

Exercise 2: Check if string contains substring

Write a shell script that accepts a string and a substring from the user (use read command). Then check if the string contains that substring and print a message accordingly.

Hint: Use read command to get inputs from the user

Difficulty level: Easy

Exercise 3: Check if file exists

Write a shell script that checks whether a file exists or not. For the simplicity, keep the full file path in the script directly.

Difficulty level: Easy

Hint: -f allows you to check for file

Output: Check the result by creating a file with the given path in the script. Run the script and check. Delete the file and check again.

Exercise 4: Check if a given string is empty

Write a shell script that prompts user to enter a string (if user wants) and then checks if the input string is empty or not.

Difficulty level: Easy

Hint: Either use the negation -n or -z to check the if size is zero

Exercise 5: That's odd (or perhaps even)

Write a shell script that accepts a positive integer as argument and checks if the number is odd or even and prints 'Number X is odd' or 'Number X is even' accordingly.

If there is no argument or more than two arguments or a negative number provided, display an error message: "You have to provide one non negative number".

Difficulty level: Intermediate

Hint: Use modulo operator % to check if remainder is 0 or not. \$# gives the number

Output: For number 182, the output should be "Number 182 is even" and for input 23, the output should be "Number 23 is odd"

Solutions to the Exercises

Solution 1: +ve or -ve

Write a bash shell script that checks whether the provided number is +ve or -ve.

```
#!/bin/bash

read -p "Enter a number: " number

if [ "$number" -lt 0 ]; then
    echo "$number is negative"
else
    echo "$number is positive"
fi
```

Solution 2: Check if string contains substring

Write a shell script that accepts a string and a substring from the user (use read command). Then check if the string contains that substring and print a message accordingly.

```
#!/bin/bash

read -p "Enter the full string: " str
read -p "Enter the substring: " substr

if [[ $str == *"$substr"* ]]; then
    echo "Substring found!"
else
    echo "Substring not found!"
fi
```

Solution 3: Check if file exists

Write a shell script that checks whether a file exists or not. For the simplicity, keep the full file path in the script directly.

```
#!/bin/bash

FILE=$HOME/simple.txt

if [ -f "$FILE" ]
then
    echo "$FILE exists"
else
    echo "$FILE doesn't exist"
fi
```

Solution 4: Check if a given string is empty

Write a shell script that prompts user to enter a string (if user wants) and then checks if the input string is empty or not.

```
#!/bin/bash

read -p "Enter a string (if you want): " str

if [ -z "$str" ]; then
    echo "Empty string"
else
    echo "String is not empty"
fi
```

Solution 5: That's odd (or perhaps even)

Write a shell script that accepts a positive integer as argument and checks if the number is odd or even and prints 'Number X is odd' or 'Number X is even' accordingly.

```
#!/bin/bash

if [ $# -ne 1 ] || [ $1 -lt 0 ]; then
    echo "You have to provide one non negative number"
elif [ $((($1 % 2)) -eq 0 ); then
    echo "$1 is even"
else
    echo "$1 is odd"
fi
```