# Solution M7: Bash Scripts and Automation

One possible solution could be:

1. We create a file named **user-data.sh** with the following content:

**#!/bin/bash**

**#**

**# user-data.sh**

**#**

**# Collects user name (first and last) and birth place**

**#**

**echo "Please answer the following questions:"**

**read -p "First name: " FIRST\_NAME**

**read -p "Last name: " LAST\_NAME**

**read -p "Birth place: " BIRTH\_PLACE**

**echo "The information will be stored in /tmp/user-data.dat"**

**echo "$FIRST\_NAME;$LAST\_NAME;$BIRTH\_PLACE" >> /tmp/user-data.dat**

1. Make it executable

[lsauser@centos ~]$ **chmod +x user-data.sh**

1. After three executions we have the following (sample) data:

[lsauser@centos ~]$ **cat /tmp/user-data.dat**

John;Smith;London

Jane;Hudson;Manchester

Oliver;Stone;New York

1. Then we create a file named **show-data.sh** with the following structure:

**#!/bin/bash**

**#**

**# show-data.sh**

**#**

**# Reads a file line by line and displays each row with a prefix**

**#**

**if [ $# -ne 1 ]; then**

**echo "Incorrect set of parameters!"**

**echo "Usage: show-data.sh file\_to\_read"**

**exit 1**

**fi**

**ROW\_NUM=1**

**echo "File $1 contains:"**

**# The reason for this syntax is that we want no matter are there white spaces**

**# in the line or not to treat it as a whole**

**# For example - if we have line: Oliver;Stone;New York**

**# And we go with the following structure:**

**# …**

**# for row in $(cat $1)**

**# …**

**# Then the output will be:**

**# …**

**# Row #3: Oliver;Stone;New**

**# Row #4: York**

**# …**

**# Instead we want this:**

**# …**

**# Row #3: Oliver;Stone;New York**

**# …**

**# Of course, there are other possible solutions :)**

**while read row;**

**do**

**echo "Row #$ROW\_NUM: $row"**

**ROW\_NUM=$(($ROW\_NUM+1))**

**done < $1**

1. Make it executable

[lsauser@centos ~]$ **chmod +x show-data.sh**

1. Execute it with

[lsauser@centos ~]$ **./show-data.sh /tmp/user-data.dat**

1. Create a new file named **archiver.sh** with the following content:

**#!/bin/bash**

**#**

**# archiver.sh**

**#**

**# Archives a folder to a file**

**#**

**if [ $# -ne 2 ]; then**

**echo "Incorrect amount of parameters!"**

**echo "Usage: archiver.sh /path/to/folder /path/to/file.tar.gz"**

**exit 1**

**fi**

**if [ ! -d $1 ]; then**

**echo "Parameter 1 is not a folder or it does not exists!"**

**echo "Usage: archiver.sh /path/to/folder /path/to/file.tar.gz"**

**exit 2**

**fi**

**if [ -f $2 ]; then**

**echo "Parameter 2 is an existing file and it should be a non-existing one!"**

**echo "Usage: archiver.sh /path/to/folder /path/to/file.tar.gz"**

**exit 3**

**fi**

**tar cvzf $2 $1**

1. Make it executable

[lsauser@centos ~]$ **chmod +x archiver.sh**

1. Execute it with

[lsauser@centos ~]$ **sudo ./archiver.sh /etc etc.tar.gz**

*Self-check Script Output:*

[lsauser@centos ~]$ **curl -s https://courses.zahariev.pro/m7.sh | sudo bash**

\* Working on RHEL-based machine (BIOS)

\* Testing if ~/user-data.sh file exists and is executable ...

... PASS

\* Testing if ~/user-data.sh file has the required parts ...

... PASS

\* Testing if ~/user-data.sh file is working as expected ...

... PASS

\* Testing if ~/user-data.sh has been executed at least 3 times ...

... PASS

\* Testing if ~/show-data.sh file exists and is executable ...

... PASS

\* Testing if ~/show-data.sh file has the required parts ...

... PASS

\* Testing if ~/show-data.sh file is working as expected #1 (with params) ...

... PASS

\* Testing if ~/show-data.sh file is working as expected #2 (no params) ...

... PASS

\* Testing if ~/archiver.sh file exists and is executable ...

... PASS

\* Testing if ~/archiver.sh file has the required parts ...

... PASS

\* Testing if ~/archiver.sh file is working as expected #1 (no params) ...

... PASS

\* Testing if ~/archiver.sh file is working as expected #2 (one param - exising file) ...

... PASS

\* Testing if ~/archiver.sh file is working as expected #3 (one param - non existing dir) ...

... PASS

\* Testing if ~/archiver.sh file is working as expected #4 (two params - existing file) ...

... PASS

\* Testing if ~/archiver.sh file is working as expected #5 (two params - correct) ...

... PASS

{"message":"Your solution report is available here: https:\/\/courses.zahariev.pro\/check.php?20220122105251DH2V8jhCpZ","status":true}