Bash Tutorials

Read/Watch the required knowledge, and complete each section’s activity

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# 1: Setup Git + Source Tree and test working

**Required Knowledge:**

None

**Activities:**  
Follow instructions to install and setup Git-Bash application

1) Install Git-Bash (defacto best git cli for windows, and comes with Bash cli pre-packaged!)

* <https://gitforwindows.org/>

2) install Source Tree (best git repo manager for advanced git management)

* <https://www.sourcetreeapp.com/>
* <https://community.atlassian.com/t5/Sourcetree-questions/I-always-get-a-popup-credential-helper-selector-asking-me-to/qaq-p/1465880>

3) Run a simple version command, to make sure your setup is working

$ git --version

git version 2.31.0.windows.1

# 2: Variables

**Required Knowledge:**

Read sections  
<https://ryanstutorials.net/bash-scripting-tutorial/bash-script.php>

<https://ryanstutorials.net/bash-scripting-tutorial/bash-variables.php>

**Activities:**

Create a script that will take a filename as the first argument, and copy it to a new file with current date prefixed

**# ./copy-dated.sh xxx.jpg**

Current date is 2022\_06\_21  
copying xxx.jpg to 2022\_06\_21\_xxx.jpg

**Bonus Activities:**

Colour your debug print statements “grey”  
see <https://misc.flogisoft.com/bash/tip_colors_and_formatting>

# 3: User Input

**Required Knowledge:**

Read sections  
<https://ryanstutorials.net/bash-scripting-tutorial/bash-input.php>

**Activities:**

Create a script that will ask for their name and print out “Hello <name>”

**# ./hello.sh**

What is your name ?  
*Anthony*Hello Anthony

# 4: Arithmetic

**Required Knowledge:**

Read sections  
<https://ryanstutorials.net/bash-scripting-tutorial/bash-arithmetic.php>

**Activities:**

Create a script that will take two number arguments and add them together

**# ./add.sh 1 2**

3

# 5: If Statement

**Required Knowledge:**

Read sections  
<https://ryanstutorials.net/bash-scripting-tutorial/bash-if-statements.php>

**Activities:**

Create a script that will ask for their birthday (in format YYYY-MM-DD), and print out “Happy Birthday” when today is there birthday, and “Happy not Birthday”

**# ./happy\_birthday.sh**

What is your birthday ? (YYYY-MM-DD)  
*1982-11-18*Happy not birthday

# 6: Loops

**Required Knowledge:**

Read sections  
<https://ryanstutorials.net/bash-scripting-tutorial/bash-loops.php>

**Activities:**

Create a script that takes number as the first argument, and use that number to return the Fibonacci number of that list position, so for 5 would be 8 aka fib number 5 (where fib numbers are 1,2,3,5,8,13,21…)

Use loops to calculate that Fibonacci number

Aka 3rd Fibonacci number is 3, 7th Fibonacci number is 21

<https://www.mathsisfun.com/numbers/fibonacci-sequence.html>

**# ./fibonacci.sh 7**

21

# 7: Functions

**Required Knowledge:**

Read sections  
<https://ryanstutorials.net/bash-scripting-tutorial/bash-functions.php>

**Activities:**

Go through previous activities and rewritten them using functions

Well done you’re finished with Bash!