

1. Write bash script that contains an array with these amino acids:

Methionine

Leucine

Cysteine

Alanine

Valine

Tyrosine

Proline

Use a for loop to print each item and its length (1 pt).

```
bsavaliala@Birava:~/BINF2111/BINF2111/data$ nano for_loop.sh
bsavaliala@Birava:~/BINF2111/BINF2111/data$ bash for_loop.sh
Methionine has length 10
Leucine has length 7
Cysteine has length 8
Alanine has length 7
Valine has length 6
Tyrosine has length 8
Proline has length 7
bsavaliala@Birava:~/BINF2111/BINF2111/data$ |
```

2. Write a bash script that uses a while loop to read through a given file. Print each line in the file and the character count of that line (1 pt).

```
bsavaliala@Birava:~/BINF2111/BINF2111/data$ nano white_loop.sh
bsavaliala@Birava:~/BINF2111/BINF2111/data$ la
CoV_Sprotein.faa      answer_q10.txt      empty_lines.txt      for_loop.sh          lab3_EFMCounts.tsv  name_game.csv        read.sh
CoV_furin_seq.faa     bonus7.sh           eukaryotes.tsv       goldmedal.csv        lab6                 name_game.csv.txt    readme.md
Lab3.tar.gz           converted.fasta      example2.fasta        header.sh            loop.sh              pUC19c.fasta        string.sh
MultiN.fastq          count_number.sh      example2.fasta        kite_data.txt         loop2.sh             parameters.sh         text_file.txt
RW2.fna               doppelganger_names.txt fixed.fq              lab3_EFMCounts.csv   loopc.sh             print_range.sh       tsv2csv.sh
Top5_trendingCPUlang.csv  doppelganger_names.txt fixed.fq              lab3_EFMCounts.csv   make_txt.sh          print_range.sh       white_loop.sh
bsavaliala@Birava:~/BINF2111/BINF2111/data$ bash white_loop.sh kite_data.txt
Line: Kite rats Kite caSh RED kite
Character count: 28
Line: kite rats kite red caSh rats
Character count: 28
Line: kite rats kite caSh red green
Character count: 29
Line: Kite rats kite cash RED kite
Character count: 28
Line: kite rats kite RED caSh rats
Character count: 28
Line: kite rats kite caSh red green
Character count: 29
Line: Kite red kite CASH RED kite
Character count: 27
Line: kite rats kite red caSh rats
Character count: 28
Line: kite Green kite CASH red green
Character count: 30
bsavaliala@Birava:~/BINF2111/BINF2111/data$ |
```

3. Write a bash script for the following pseudo code (1 pt):

Counter variable equal to 0

Quote variable equal to "This script will run again"

Until counter is not less than 10

Print quote

Set quote equal to quote + " and again"
Increment counter (add 1)
End until

Print "Until it is done"

```
bsavalialia@Birava:~/BINF2111/BINF2111/data$ bash until_loop.sh
This script will run again
This script will run again and again
This script will run again and again and again
This script will run again and again and again and again
This script will run again and again and again and again and again
This script will run again and again and again and again and again and again
This script will run again and again and again and again and again and again and again
This script will run again and again and again and again and again and again and again and again
This script will run again and again and again and again and again and again and again and again and again
This script will run again and again and again and again and again and again and again and again and again and again
Until it is done
bsavalialia@Birava:~/BINF2111/BINF2111/data$ moer until_loop.sh
Command 'moer' not found, did you mean:
  command 'moar' from deb moarvm (2022.12+dfsg-1)
  command 'more' from deb util-linux (2.39.3-9ubuntu6.3)
Try: sudo apt install <deb name>
bsavalialia@Birava:~/BINF2111/BINF2111/data$ more until_loop.sh
#!/bin/bash

counter=0
quote="This script will run again"

until [ $counter -ge 10 ]
do
    echo "$quote"
    quote="$quote and again"
    ((counter++))
done

echo "Until it is done"
bsavalialia@Birava:~/BINF2111/BINF2111/data$ |
```

4. Write a bash script that contains a function that prints the following: your name, your username, the date/time, and your current directory (1 pt). Make sure you call the function!

```
bsavalialia@Birava:~/BINF2111/BINF2111/data$ touch function.sh
bsavalialia@Birava:~/BINF2111/BINF2111/data$ nano function.sh
bsavalialia@Birava:~/BINF2111/BINF2111/data$ bash function.sh
Name: Birava Savalia
Username: bsavalialia
Date/Time: Thu Sep 25 15:06:26 EDT 2025
Current Directory: /home/bsavalialia/BINF2111/BINF2111/data
bsavalialia@Birava:~/BINF2111/BINF2111/data$ |
```

5. Write a bash script that contains a function that will add any two numbers together. Within the function, print both numbers and the sum. Return 0 to signify that the function was successfully executed. Call the function three separate times, using different numbers each time (1 pt).

```
bsavalia@Birava:~/BINF2111/BINF2111/data$ nano adding.sh
bsavalia@Birava:~/BINF2111/BINF2111/data$ bash adding.sh
First number: 55
Second number: 6
Sum: 61
-----
First number: 12
Second number: 60
Sum: 72
-----
First number: 100
Second number: 250
Sum: 350
-----
bsavalia@Birava:~/BINF2111/BINF2111/data$ |
```

6. Make a public GitHub repository called BINF-2111 (or BINF2111, it's up to you). Make the following directories in your repository (2 pts):

Labs

Notes

Lectures

Resources

Practice Scripts

There should be a readme file and at least 2 files in each directory (1 pt). Additionally, the repo's readme should contain your name, the semester we are in (Fall 2025), your major, and your year (freshman, sophomore, junior, senior, fifth year) (2 pts). (5 pts total)

https://github.com/biravasavalia/BINF_2111.git