Anthony Higareda

CPE 2600 – 131

Lab 8

Tagging Version 2.0 for the completion of Lab 8

```
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ git tag -a v2.0 -m "Release v2.0 for Lab 8 Completion
"
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ git push --tags
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 182 bytes | 182.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/MSOE-CPE2600/vector-lab-turney-anthonyHigareda.git
 * [new tag]         v2.0 -> v2.0
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ git log
commit d7d355c069bef2423bfd610fb7140716e7b75d4c (HEAD -> main, tag: v2.0, origin/main)
Author: Anthony Higareda <higaredajra@msoe.edu>
Date:   Tue Oct 21 16:02:10 2025 -0500

    Release v2.0
```

A look at the README

```
# VECTOR CALCULATOR
### Version 2.0: Released 21 October 2025

#### Developed by Anthony Higareda for MSOE CPE2600-131, Systems Programming, Lab 7<br><br><br>

Create 3-dimensional vectors and perform mathematical functions on them.
This program uses dynamic memory to store a near-infinite amount of vectors.

*Build the program with:*
> `gcc -o vector main.c mathcontroller.c storagecontroller.c userinterface.c - Wall`

*Run the program with:*
> `./vector`

**Mathematical Functions Available:**
- Addition
  > `c = a + b`
- Subtraction
  > `c = a - b`
- Scalar Multiplication
  > `c = a * 9`
- Dot Product
  > Returns a floating-point value; cannot be saved as a vector!<br>
  > `a . b`
- Cross Product
  > `c = a X b`

**A note about the required syntax:**
All terms and symbols must be separated by one and ONLY one space `" "` or comma `","`
> `c = a + b` OR `c,=,a,+,b` OR `c =,a +,b`

**System Functions Available:**
```

Checkout of Version 1.0, verifying functionality, and applying the v1.0 tag.

```
commit 130e54fd136e96a138360db6e66f6b9f2809e9bc
Author: Anthony Higareda <higaredajra@msoe.edu>
Date:   Tue Oct 14 14:03:59 2025 -0500

    Initial Version
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ git push --tags
Everything up-to-date
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ git checkout 130e54
Note: switching to '130e54'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

  git switch -c <new-branch-name>

Or undo this operation with:

  git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at 130e54f Initial Version
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ make
gcc -c -Wall main.c -o main.o
gcc -MM main.c > main.d
gcc -c -Wall mathcontroller.c -o mathcontroller.o
gcc -MM mathcontroller.c > mathcontroller.d
gcc -c -Wall storagecontroller.c -o storagecontroller.o
gcc -MM storagecontroller.c > storagecontroller.d
gcc -c -Wall userinterface.c -o userinterface.o
gcc -MM userinterface.c > userinterface.d
gcc main.o mathcontroller.o storagecontroller.o userinterface.o  -o vector
```

```
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ ./vector
VectorMe> a = 1 2 3
a = 1.000 2.000 3.000
VectorMe> b = 1 2 3
b = 1.000 2.000 3.000
VectorMe> c = 1 2 3
c = 1.000 2.000 3.000
VectorMe> d = a + b
d = 2.000 4.000 6.000
VectorMe> e = a - b
e = 0.000 0.000 0.000
VectorMe> f = c * 3
f = 3.000 6.000 9.000
VectorMe> g = 1 2 2
g = 1.000 2.000 2.000
VectorMe> h = a X h
h = 0.000 0.000 0.000
VectorMe> h = a X g
♦ ♦♦ = -2.000 1.000 0.000
VectorMe> i = 3 1 4
i = 3.000 1.000 4.000
VectorMe> j = 4 2 0
Storage is full! Please clear storage with "clear" before adding new vectors
VectorMe> clear
All vectors cleared
VectorMe> x = 1 2 3
x = 1.000 2.000 3.000
VectorMe> quit
Goodbye
higaredajra@AAD-PF5NJ7KW:~/cpe2600/vector-lab-turney-anthonyHigareda/vector-lab-turney-anthonyHigareda$ git tag -a v1.0 -m "Version 1.0 Release"
```