CSci 427 Homework 1

Due: 5:00 pm, Monday, 1/21

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This assignment took around 2 hours total to finish. No additional files or methods were implemented. All features provided seemed to work correctly.

This assignment was a fairly straightforward introduction to how future assignments will look and work. The comments and lecture 1 were sufficient enough resources to implement all required functions except for normalize(). For normalize(), a simple wolfram alpha search was all that was needed to implement the method. Finally, Any results that did not have a provided answer was checked using wolfram alpha to run the respective operation.

Output:

```
eric@ubuntu: /Documents/WM-CompSci-Work/cs427/HW1$ ./hw1
Vector u = [1,2,3]
Vector v = [1,0,0]
Vector w = [0,1,0]
u + v = [2,2,3] should be: [2,2,3]
u - w = [1,1,3] should be: [1,1,3]
u * w = [0,2,0] should be: [0,2,0]
u * 0.5f = [0.5,1,1.5] should be: [0.5,1,1.5]
2.0f * ((v+w) / u)) = [2,1,0]
v += w, v = [1,1,0] should be: [1,1,0]
v *= u, v = [1,2,0] should be: [1,2,0]
v /= u, v = [1,1,0] should be: [1,1,0]
v -= w, v = [1,0,0] should be: [1,0,0]
u.squared_length() = 14 should be: 14
v.dot(u) = 1
v.dot(w) = 0
w.dot(v) = 0
v.normalize() = [1,0,0] should be: [1,0,0]
u.normalize() = [0.267261,0.534522,0.801784]
v.cross(w) = [0,0,1] should be: [0,0,1]
u.cross(w) = [-3,0,1]
u.cross(u) = [0,0,0]
```