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Lab 2: Position and Velocity

1. After developing and testing your **Physics** class, implement a static main method (it can be in a separate class if you wish, or in the **Physics** class - your choice). Enter the code shown below and run it. Ensure the code you developed runs without issue. Include a plaintext file in your lab submission and describe the output on the console when you run the code.

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Home/bin
/java -javaagent:/Applications/IntelliJ IDEA
CE.app/Contents/lib/idea_rt.jar=51005:/Applications/IntelliJ IDEA
CE.app/Contents/bin -Dfile.encoding=UTF-8 -classpath
/Users/jialihan/IdeaProjects/Lab2/out/production/Lab2
distance.Physics

Displacement = 1.7320508075688772
Prof. Keith is on the move! His Velocity =0.34641016151377546
Encountered an error: The time value provided cannot be zero or
negative.
```

2. Swap the **elapsedTime** values in the method calls such that 5 becomes 0 and the 0 becomes 5. Run the code again. Describe the output in your text file submission.

```
/Library/Java/JavaVirtualMachines/temurin-17.jdk/Contents/Hom
e/bin/java -javaagent:/Applications/IntelliJ IDEA
CE.app/Contents/lib/idea_rt.jar=51177:/Applications/IntelliJ
IDEA CE.app/Contents/bin -Dfile.encoding=UTF-8 -classpath
/Users/jialihan/IdeaProjects/Lab2/out/production/Lab2
distance.Physics

Displacement = 1.7320508075688772
Encountered an error: The time value provided cannot be zero
or negative.
```

3. Create a UML class diagram that describes the system you constructed.