# Exercise 4 – Bugs in Motion

CS 111

due September 9, before class

**1. Identify what edge case(s) can occur. (Hint: Something undefined can happen.)**

Edge case 1: When $v$ velocity (in m/s) is 0, an error occurs since 0 can't be used for denominator.

Edge case 2: When either $d$ distance (in m) or $v$ velocity (in m/s) receives a data and used for calculation before converting into supported operand type for doing calculation.

**2. Write some test cases that do not trigger any edge cases, and then write some that do.**

Test case 1(Does not trigger any edge cases):

When inputs are $v = 14$ and $d = 2$, cast both variables with float().

Test case 2(Does trigger edge cases):

When inputs are $v = 0$ and $d = 2$.

Test case 3(Does trigger edge cases):

When inputs are $v = 14$ and $d = 2$, jump into divisions without casting both variables with float().

**3. For one edge case that you identified, insert some additional pseudocode that will alert the user to the problem by printing "This causes an edge case!". The resulting pseudocode should print this message instead of executing the edge case in question.**