SQA Assignment 6 – Spring 2021

Due: 11:59PM, Wednesday, 3/24
Questions: Contact XIAOPU PENG <xzp0007@auburn.edu>

Problem Descriptions:

You have just purchased a stereo system with price **y** with the following two credit plan choices: (1) down payment **d** < **y/2**, with interest rate **r(%)** per month of the remaining balance, and payoff in **12** months; and (2) down payment **d** >= **y/2**, with interest rate of **r/2**, and payoff in **6** months.

A function, **cost** calculates the total cost you pay for this stereo system. It takes in 3 parameters: **(y, d, r)** and returns the total payment as **y + (y – d) * (r/100) * 12** when d < y/2 or **y + (y – d) * (r/2/100) * 6** when d >= y/2

y: a positive float

d: a positive float

r: a positive float

Use **functional equivalence partitioning** approach to design test cases for this function. You should have at least three levels of partition. You must show your partitioning tree. Generate one test case for each leaf node. Some invalid test cases must also be designed

Note each test case should look like:
((input_y, input_d, input_r), expected_output)
For example:
((1000, 500, 5), 1075)
((1000,200,2), 1192)
((1500, -1.5, -5), exception)
((‘a’, ‘b’, ‘c’), exception)
…