**Unit Test Section**

1. A function called "multiplication" that returns the product of the two input numbers.

This kind of test requirement would only need unit tests. An integration or functional test is not required because we do not know what it is to be used for.

Unit Test

* Expect multiply(2 , 3) to be a number
* Expect multiply(2,3) to be 6
* Expect multiply(“a”, 3) to be an error
* Expect multiply(.5, 3) to have a decimal
* Expect multiply(-1,2) to be a negative number
* Expect multiply(1,2,3) to be an error
* Expect multiply(1,false) to be an error
* Expect multiply(“2”,”3”) to be a number (Convert a string that is just numbers to number and multiply the two together)

1. A function called "concatOdds" takes two arrays of integers as arguments. It should return a single array that only contains the odd numbers, in ascending order, from both of the arrays.

Unit Test

* Expect concatOdds to take two parameters being two arrays of numbers
* Expect concatOdds([3,2,1] ,[9,1,1,1,4,15,-1]) to return a single list of numbers
* Expect concatOdds(([3,2,1] ,[9,1,1,1,4,15,-1) to result in [-1,1,3,9,15]
* Expect concatOdds() to take two list of numbers and return a list of just the odd numbers in ascending order
* Expect concatOdds(([3,2,1] ,[9,1,1,1,4,15,-1,”h”]) to return an error
* Expect concatOdds(([3,2,1,”h”] ,[9,1,1,1,4,15,-1]) to return an error
* Expect concatOdds(([3,2,1,”h”] ,[9,1,1,1,4,15,-1, false]) to return an error
* Expect concatOdds([3,2,1, true] ,[9,1,1,1,4,15,-1]) to return an Error
* Expect concatOdds to not return any multiples of the same number if there are 4 ones it should only appear in the list once
* Expect concatOdds(3, [9,1,1,1,4,15,-1]) to return an error because it is not a list comparing a list just a number comparing a list
* Expect concatOdds() having any parameters that are not both lists to automatically throw an error whether it is a Boolean, string, or a single number
* Expect concatOdds() to throw an error if a list exists with non-number strings inside it.

**Functional Test Section**

1. A shopping cart checkout feature that allows a user to check out as a guest (without an account), or as a logged-in user. They should be allowed to do either, but should be asked if they want to create an account or log in if they check out as a guest.

* Operate the shopping cart checkout feature as a user (Purchase as guest)
  + Go to the site
  + Do not log in
  + Search for items to purchase
  + Items should have an add to shopping cart button that user can click and add to cart
  + When done user should be able to click on the shopping cart button found in the upper navigation bar to get to shopping cart
  + User should be able to see all chosen items in cart
  + User should be able to press a button to proceed to checkout or cancel
  + User clicks proceed to check out
  + Ask customer with prompt of some kind to create an account or continue as a guest.
  + Have user continue as guest and check out products
  + User receives all emails about order and invoice of purchase
* Operate the shopping cart checkout feature as a user (Create Account But don’t buy)
  + Go to the site
  + Do not log in
  + Search for items to purchase
  + Items should have an add to shopping cart button that user can click and add to cart
  + When done user should be able to click on the shopping cart button found in the upper navigation bar to get to shopping cart
  + User should be able to see all chosen items in cart
  + User should be able to press a button to proceed to checkout or cancel
  + User clicks proceed to check out
  + Ask customer with prompt of some kind to create an account or continue as a guest.
  + User creates an account
  + User does not purchase anything and closes window (User may be busy)
  + (Make sure the users information is correctly captured)
* Operate the shopping cart checkout feature as a user (Create Account and buy)
  + Go to the site
  + Do not log in
  + Search for items to purchase
  + Items should have an add to shopping cart button that user can click and add to cart
  + When done user should be able to click on the shopping cart button found in the upper navigation bar to get to shopping cart
  + User should be able to see all chosen items in cart
  + User should be able to press a button to proceed to checkout or cancel
  + User clicks proceed to check out
  + Ask customer with prompt of some kind to create an account or continue as a guest.
  + User creates an account
  + User continues with Checkout
  + User receives all emails associated to Account Creation
  + User receives all emails about order and invoice of purchase
* Operate the shopping cart checkout feature as a user (User already has account)
  + Go to the site
  + Customer does Log in
  + Search for items to purchase
  + Items should have an add to shopping cart button that user can click and add to cart
  + When done user should be able to click on the shopping cart button found in the upper navigation bar to get to shopping cart
  + User should be able to see all chosen items in cart
  + User should be able to press a button to proceed to checkout or cancel
  + User clicks proceed to check out
  + User continues with Checkout
  + User receives all emails about order and invoice of purchase
* Operate the shopping cart checkout feature as a user (User forgets to add to cart)
  + Go to the site
  + Customer does Log in
  + Search for items to purchase
  + Items should have an add to shopping cart button that user can click and add to cart
  + User does not add items and clicks button for shopping cart found in the upper navigation bar
  + Customer does not notice shopping cart is empty and tries to proceed with check out
  + A pop up explains to the customer they must add items to the cart.
  + The customer can decide to find items or leave the site.