**Function Multiplication Unit Test:**

**Happy:**

* Inputs are integers
* Only two inputs
* Multiplies the two numbers and gives correct integer

**Unhappy:**

* Letters or special characters are input
* Return number is too large
* More than 2 inputs
  + Expect [multiplication (2, 5) to be integer
  + Expect [multiplication (2, 5) to be 10
  + Expect [multiplication (z, 5) to be error
  + Expect [multiplication (2, !) to be error
  + Expect [multiplication (2.111111155515151515, 513246548998799) Answer to fit in screen or round.
  + Expect [multiplication (2 2 , 10) to be error

**Funtion concatOdds Unit Test:**

**Happy**

* Filter only showing odds
* Return only one array
* Does not repeat integers
* Odd integers exist
* Only Integer input

**Unhappy**

* Integer filter does not work
* Return even numbers
* Array has no letters or special characters
  + Expect [concatOdds ([2, 5,3,7,9],[1,2,3]) to return [3,5,7,9]
  + Expect [concatOdds ([$, 5,3,7,9],[1,2,3]) to return error
  + Expect [concatOdds ([1, 2,3,4,5],[1,2,3]) to return [1,3,5]
  + Expect [concatOdds ([a, b,c],[1,2,3]) to return error
  + Expect [concatOdds ([1, 2,3,4,5],[1,2,3], [1,2,3])) to return error

**Shopping Cart Function Test:**

**Happy:**

* Guest or with account only
* Cart is not empty
* Create account feature is active
  + Username
    - Check that it does not exist
  + Password
    - Meets criteria (8 characters)

**Unhappy:**

* No account feature shown
* Cart is empty
* Only guest option available
* Only Account login available
* No log in available
* Create Account
  + No create account
  + Create account does not take to create an account
  + Username Exists
  + Minimum Criteria not meet
* Expect [GUI , Login, Create account, Guest] to be good
  + Expect [GUI , Login, Create account] Insufecent
  + Expect [GUI, Create account, Guest] Insufecent
  + Expect [GUI, Login, Create account] Insufecent
* Expect [Cart, 1] Move to checkout
  + Expect [Cart, 5] Move to checkout
  + Expect [Cart, 0] return error
* Expect [Create Account, New user] return new user name
  + Expect [Create Account, existing user] return error
* Expect [Password, asd123w!] return good
  + Expect [Password, asd12] return error not enough characters