CS 1632 – DELIVERABLE 2: Automated System Testing of a Web Application

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Https://github.com/bmb122/D3

In creating the web application, my biggest hurdle was my inexperience with HTML coding. I have never had any prior experience with web development whatsoever, so learning the quirks with HTML took a bit of time before I became comfortable with it. Thankfully, HTML is quite intuitive to learn, and I really enjoyed the organizational aspect of HTML. The only other wall I hit during coding the program was the decision of how to implement the truth table itself. I decided that it would be easiest to place all the values I need to display on the screen into an array that is able to be accessed by my index.erb file. This array is composed of purely zeros and ones, with zero representing false and one representing true. The function that populates this array goes through a for loop from 0 to 2^(table\_size)-1. This loop begins with creating a string that holds the binary value of the number the loop is on that has a character number equivalent to the size of the table (i.e. if the table size is 3, 0 would be 000, and 2 would be 010). This string is then split into an array, and added to the array that will be used to populate the HTML page. The array then is given three more values which hold the truth value for AND, OR, and XOR. The loop then cycles until all values have been added to the array. When the truth table page displays, I loop through the array, placing the variable for true whenever a 1 is encountered, and false when a 0 is encountered.

Traceability Matrix

REQ1: test\_button\_text

REQ2: test\_main\_page\_link, test\_table\_link, test\_error\_param\_link, test\_error\_address\_link

REQ3: test\_invalid\_param\_h1\_text, test\_invalid\_param\_text

REQ4: test\_true\_false\_same\_char\_error, test\_table\_size\_one\_error, test\_multi\_char\_true\_error, test\_multi\_char\_false\_error, test\_table\_size\_char\_error

REQ5: test\_valid\_table\_titles, test\_true\_false\_symbols

REQ6: test\_AND\_functionality, test\_OR\_functionality, test\_XOR\_functionality

REQ7: test\_default\_values, test\_default\_true, test\_default\_false, test\_default\_size

REQ8: test\_wrong\_url