Homework 1
PDF Report
Group Members - Rylan Voiles, Cameron Rutherford, Ashley Doss, Jeb Irvin
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Youtube Demo - https://youtu.be/A3bBtXQOeXg
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For this project, I was tasked with creating an HTML form in arrayDemo.html and embedding PHP code in arrayDemo.php to dynamically generate and process a 2D array. The form needed inputs for the number of rows, columns, and a range of random values, which would then be passed to the PHP file for processing.

Our group met early on to figure out how to approach the project. Rylan Voiles helped us organize the structure for the form and how to collect the input, while Cameron Rutherford focused on understanding how to embed PHP into the HTML to make the page dynamic. We also had to make sure everything worked with XAMPP, so we spent time figuring out how the server environment would simulate a real-world setup. Ashley Doss and Jeb Irvin were both really helpful in working through the logic for processing the 2D array and getting the right outputs like sums, averages, and standard deviations for each row.

Once we got the form working, the next challenge was making sure the PHP file did what it was supposed to do with the input values. The PHP file was responsible for generating the 2D array, printing it in a table, and calculating the row sums, averages, and standard deviations. Using number_format() to limit the decimals to three places was a small but important detail that made the output much cleaner. Another task was labeling each value in the table as "positive," "negative," or "zero," which required some conditional statements in the PHP script.

Of course, there were some hiccups along the way. One of the bigger issues was getting XAMPP to recognize the PHP file. It took us a while to figure out that I had placed the PHP file in the wrong directory— it needed to be in the htdocs folder. It's a simple mistake, but it's the kind of thing that can really throw you off when you're working on these kinds of projects.

Other issues we ran into were pretty common for this type of assignment. Embedding PHP in HTML can be tricky at first, especially if you forget to use the correct PHP tags when switching between HTML and PHP code. Passing the form data from the HTML file into the PHP script also caused some headaches, especially when we accidentally mismatched the $_POST method. Another issue was formatting the tables. Since we were generating the tables dynamically with PHP, it wasn't as straightforward as writing static HTML. We spent some time debugging errors that didn't always make sense right away, and I remember having trouble getting the standard deviation calculation to work because we were referencing the wrong variable in the loop.

Despite the challenges, the project came together nicely in the end. We added a link to the PHP-generated page so users could easily navigate back to arrayDemo.html and resubmit new values. Overall, the project went well, and it was a good learning experience in handling PHP, HTML, and working with server environments like XAMPP. Plus, I feel like I've gotten a lot better at troubleshooting those small but frustrating mistakes that tend to pop up when you're working on something like this.