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**Course: WEB 222 NEE**

**Assignment: Final Assessment - Reflection**

In order to validate the user inputs, first I need to have the “form” tag and include the global validate function in the “OnSubmit” event so that when the user clicks on submit, the inputs are checked first before submission. I defined a child validate function for each of the required fields, which verifies user’s input based on different criteria. For example, I have a validate\_name() function dedicated to make sure that the Name field only include a minimum of 4 alphabetic character with space allowed, a validate\_phone() to check if the phone number submitted is in correct format. This approach of dividing the validation of each field into separate functions will make it easier for me to debug them and improve reusability. Next, the global validate function is designed to run all these child functions and at the end check if all of them pass successfully. If yes, the user’s input content is submitted, if not then an error message will show up to alert the user about the wrong input format.

To test my form validation, I entered wrong format information into each of the fields and verify if the error message is correct. I focus on one field at a time and submit to make sure the process works for it before moving on to next one. Each time I see that the validation does not work, I would go through the code of the function again to find out the cause. For instance, while working on the validation\_name() function, I made a mistake while designing the algorithms that failed to accept customer name with space. After a while, I figured it out finally by writing the logic down on paper. So, the experience I drew from this is for complex check conditions, we need to have it visible in front of us before coding to minimize error.

One thing I would like to draw the attention of other web developers about forms is that validation is very important. It will help to ensure the quality of data being transmitted to our end, which is crucial to maintain correct user information and further data analysis. Moreover, the fact that data is validated before submission also helps us to avoid incomplete/incorrect data to be sent over the network hence reduce wasting bandwidth usage. Another thing is we need to be very careful with names (tag names, element names…) because one tiny mistake and the script will stop working. It will be hard to find this type of error because there are no alert and step by step debugging capability is limited.

Finally, thanks to this exercise, I understand now that data validation is not an easy step but requires lots of attention. We need to anticipate the case when users put in wrong format input, or even format that would be harmful to our database (in case of hacking), while trying to maintain the user-friendly interface. This is something new I learned through this assignment which will be useful as form is an important part of web user interaction.