Practice Questions – September 16 ,2024

These questions are based on our discussion of functions and examples we did during the last two weeks. Refer to the lecture codes of Week2 and Week3 of Programming with JavaScript.

This is just a practice mostly of how you would be able to write functions and declaration, expressions and or arrow functions. Try to write functions in all given types that is you might want to write few functions in declarations, few in expressions or if preferred few in arrow syntax. This exercise will polish up your logic building alongside of JS function waysa.

Though these are ***NOT MANDATORY*** submission, but I would really suggest all to try them out and submit as to it would give myself and Dr. Qurrat-ul-Ain an idea of how things are going and which areas we need to focus more to make you comfortable with the topics.

For each of the following, write a function that takes the given arguments, and returns or produces (e.g., console.log) the given result. You can make an index.html and link the script file so that we can check your output in the console of the browser.

1. Given `r` (radius) of a circle, calculate the area of a circle (A = π * r * r).
2. Simulate rolling a dice using `random()`. The function should allow the caller to specify any number of sides, but default to 6 if no side count is given: `roll()` (assume 6 sided, return random number between 1 and 6) vs. `roll(50)` (50 sided, return number between 1 and 50).[You might need Math class or specifically Math.random() to produce a random number in JavaScript]
3. Write a function that converts values in Celcius to Farenheit: `convert(0)` should return `"32 F"`.
4. Modify your solution to the previous function to allow a second argument: `"F"` or `"C"`, and use that to determine what the scale of the value is, converting to the opposite: `convert(122, "F")` should return `"50 C"`.
5. Function taking any number of arguments (`Numbers`), returning `true` if they are all less than 50: `isUnder50(1, 2, 3, 5, 4, 65)` should return `false`.
6. Function allowing any number of arguments (`Numbers`), returning their sum: `sum(1, 2, 3)` should return `6`.
7. Function to check if a number is a multiple of 3 (returns `true` or `false`)
8. Function to subtract a discount % from a total. If no % is given, return the original value.

9. Function that takes a number of seconds as a `Number`, returning a `String` formatted like `"X Days, Y Hours, Z Minutes"` rounded to the nearest minute.
10. Modify your solution above to only include units that make sense: `"1 Minute"` vs. `"3 Hours, 5 Minutes"` vs. `"1 Day, 1 Hour, 56 Minutes"` etc