5.34- ***(Recursive Exponentiation)*** Write a recursive function power (base, exponent)that when invoked returns

$$base^{exponent}$$

For example, $power(\,3, 4\,) = 3 * 3 * 3 * 3$. Assume that exponentis an integer greater than or equal to 1. $Hint$: The recursion step would use the relationship

$$base^{exponent} = base * base^{exponent-1}$$

and the terminating condition occurs when exponent is equal to 1because $base^1 = base$.

5.30- (***Quality Points for Student's Grades***) Write a function $qualityPointsthat$ inputs a student's average and returns 4 it's 90–100, 3 if it's 80–89, 2 if it's 70–79, 1 if it's 60–69, and 0 if the average is lower than 60.

5.41- (***Distance between Points***) Write a function distance that calculates the distance between two points *(x1, y1)* and *(x2, y2)*. All numbers and return values should be of type double.

Free- (***Convert to Binary***) Write a program in C to convert decimal number to binary number using the function.

Free- ***(Lowest Common Multiple)*** Write a C program to find LCM of two numbers using recursion. How to find LCM of two numbers in C programming using recursion. Logic to find LCM of two numbers using recursion.