ASSIGNMENT – 1

1. Request a number from Client-side and server will calculate the **Square** of the number and return it to client in response. Use **TCP** Protocol implementation.
2. Request a number from Client-side and server will calculate the **Cube** of the number and return it to client in response. Use **UDP** Protocol implementation.
3. Enter a set of numeric values at client-side and send it to server-side. Server will fetch the values and return all Prime numbers from the series received. If the set of values does not have any **prime number** return 0. Use **TCP** Protocol implementation.
4. Enter a set of numeric values at client-side and send it to server-side. Server will fetch the values and return all the three **Quartiles** (Q_1, Q_2, Q_3) for the set of values received. Use **UDP** Protocol implementation.
5. Write a **menu driven** program to convert temperature entered in Celsius to Fahrenheit and vice-versa. Also use one option for Exit. Use **UDP** Protocol. Consider the below given options:
    a. Celsius to Fahrenheit
    b. Fahrenheit to Celsius
6. Write a **menu driven** program to calculate the area of different shapes. Also use one option for Exit. Take appropriate inputs from Client and use appropriate formulas for the same. Use **TCP** protocol. Consider the below given shapes:
    a. Circle
    b. Square
    c. Rectangle
    d. Triangle
7. Enter a sentence at Client side and pass it to Server. Server should convert it into **Camel Case** and return it to Client as response. Use **TCP** Protocol implementation.
    - Example, Input: SLow and STEADY wiNs the RacE
    - Output: Slow And Steady Wins The Race
8. Enter a sentence at Client side and pass it to Server. Server should convert it into **Toggle Case** and return it to Client as response. Use **UDP** Protocol implementation.
    - Example, Input: all that GLITTERS IS Not GolD
    - Output: aLL tHAT gLITTERS iS nOT gOLD