```
// Return the computed Mean
uint8_t Find_Mean(void){

        uint8_t i = 0;
        uint16_t mean = 0;

        for(i = 0; i < N; i++){
            mean = mean + Readings[i];
        }

        mean = mean/i;

        return mean;
}

// Return the computed Range
uint8_t Find_Range(void){

        uint16_t range = 0;
        int low = Readings[0];
        int high = Readings[0];

        for(int k = 1; k < N; k++){

            if(Readings[k] < low){
                low = Readings[k];
            }
            if(Readings[k] > high){
                high = Readings[k];
            }
            range = high - low;
        }

       return range;
}
```

```
// Return True of False based on whether the readings
// a non-increasing montonic series

uint8_t IsMonotonic(void){

        uint16_t mono  = 1;

        for (int p = 1; p < N; p++){
            if (Readings[p-1] < Readings[p]){
                mono = 0;
                return mono;
            }
         }
        return mono;
}
```

UART #1

```
Temperature Sensor Data Analysis
 Test Case 0
 Yes, Your Mean= 77
 Yes, Your Range= 55
 Correct Analysis of monotonicity
 Test Case 1
 Yes, Your Mean= 77
 Yes, Your Range= 55
 Correct Analysis of monotonicity
 Test Case 2
 Yes, Your Mean= 80
 Yes, Your Range= 0
 Correct Analysis of monotonicity
 Test Case 3
 Yes, Your Mean= 73
 Yes, Your Range= 60
 Correct Analysis of monotonicity
 Test Case 4
 Yes, Your Mean= 50
 Yes, Your Range= 100
 Correct Analysis of monotonicity
 Passed all tests -  End of Analysis
```