

UNIT TESTING REPORTS

1. Testing of system "clear" function in main()

```
ezaz@PC: ~/Desktop/IOT Data Processor/CUT/compile$ make
gcc -c -g -Wall -I../include ../src/main.c -o ../obj/main.o
gcc -c -g -Wall -I../include ../src/utility.c -o ../obj/utility.o
gcc -c -g -Wall -I../include ../src/menu.c -o ../obj/menu.o
gcc -c -g -Wall -I../include ../src/average.c -o ../obj/average.o
gcc ../obj/main.o ../obj/utility.o ../obj/menu.o ../obj/average.o -o ../bin/IOTDataLogger.bin
ezaz@PC:~/Desktop/IOT Data Processor/CUT/compile$ ../bin/IOTDataLogger.bin
```

```
ezaz@PC: ~/Desktop/IOT Data Processor/CUT/compile$ ../bin/IOTDataLogger.bin
*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****
Enter a valid choice [1-7]: |
```

2. Testing the non-numeric values of choice(ch) in menu()

```
ezaz@PC: ~/Desktop/IOT Data Processor/CUT/compile
*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****

Enter a valid choice [1-7]: -1

*****
* Invalid choice error occurred. *
* Kindly enter valid number i.e. [1,7]. *
*****

*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****

Enter a valid choice [1-7]: One

*****
* Invalid input. Please enter valid input *
*****
ezaz@PC:~/Desktop/IOT Data Processor/CUT/compile$ |
```

3. Testing the negative values of choice(ch) in menu()

```
ezaz@PC: ~/Desktop/IOT Data Processor/CUT/compile
*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****

Enter a valid choice [1-7]: -1

*****
* Invalid choice error occurred. *
* Kindly enter valid number i.e. [1,7]. *
*****

*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****

Enter a valid choice [1-7]: One

*****
* Invalid input. Please enter valid input *
*****
ezaz@PC:~/Desktop/IOT Data Processor/CUT/compile$ |
```

4. Testing the exit() in case 7 in menu()

```
ezaz@PC: ~/Desktop/IOT Data Processor/CUT/compile

*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****

Enter a valid choice [1-7]: 7

*****
* Take care. Bye Bye 🙋 *
*****
ezaz@PC:~/Desktop/IOT Data Processor/CUT/compile$ |
```

5. Testing loadFromFile() in utility.c file

```
ezaz@PC: ~/Desktop/IOT Data Processor/CUT/compile

Issue opening the file ../data/delhi.csv

*****
* Welcome to Data Logger Processing System *
*****
* 1. Displays the Dataset. *
* 2. Displays the monthly average Temperature *
* 3. Displays the monthly average Humidity *
* 4. Displays the monthly average PM 2.5 *
* 5. Displays the monthly average PM 10 *
* 6. Displays the monthly average NO2 *
* 7. Exit the system. *
*****

Enter a valid choice [1-7]: |
```

6. Testing the count value of average.c file

```
ezaz@PC: ~/Desktop/IOT Data Logger/CUT/compile

*****
* Welcome to Data Logger Processing System
*****
1. Displays the Dataset.
2. Displays the monthly average Temperature.
3. Displays the monthly average Humidity
4. Displays the monthly average PM 2.5
5. Displays the monthly average PM 10
6. Displays the monthly average NO2
7. Exit the system.
*****
Enter a valid choice [1-7]: 2

Month-wise comparson of Temperature
Month 1 -> 20.06
Month 2 -> 25.71
Month 3 -> 28.55
Month 4 -> 33.73
Month 5 -> 37.16
Month 6 -> 37.87
Month 7 -> 32.39
Month 8 -> 28.10
Month 9 -> 27.07
Month 10 -> 21.65
Month 11 -> 18.17
Month 12 -> 8.74

*****
* Welcome to Data Logger Processing System
*****
1. Displays the Dataset.
2. Displays the monthly average Temperature.
3. Displays the monthly average Humidity
4. Displays the monthly average PM 2.5
5. Displays the monthly average PM 10
6. Displays the monthly average NO2
```