**CMPT-318  
Assignment 1  
Group 7**

**3. Min and Max**

Note:

* **Day** = 06:00 to 17:59
* **Night** = 18:00 to 05:59
* Day and night time hours vary latitude wise, hence to approximate, 12 hours were given to each.

**Global Active Power (A)**

* **Weekdays (Mon – Fri)**
  + **Max**
    - **Day**: 8.50137
    - **Night:** 7.28797
  + **Min**
    - **Day:** -1.79218
    - **Night:** -1.7483
* **Weekends (Sat – Sun)** 
  + **Max**
    - Day: 10.82134
    - Night: 7.59959
  + **Min**
    - Day: -1.58891
    - Night: -1.65563

**Global Reactive Power (B)**

* **Weekdays (Mon – Fri)**
  + **Max**
    - **Day:** 0.968
    - **Night:** 0.67
  + **Min**
    - **Day:** 0
    - **Night:** 0
* **Weekends (Sat – Sun)**
  + **Max**
    - **Day:** 0.906
    - **Night:** 0.73
  + **Min**
    - Day: 0
    - Night: 0

**Karan Sachdeva  
Neil Mukesh Shah  
Praneer Shrestha  
Harry Preet Singh  
Wei Yao**

**PACKAGES: EnvStats (for finding geometric mean), modeest (for finding mode), lubridate (to extract hours from Time)**

A – Global Active Power

B – Global Reactive Power

C – Voltage

D – Global Intensity

**1. Global Active Power (A)**

* **Arithmetic Mean:** 1.906752
* **Geometric Mean:** 1.470784
* **Mode:** 0.324
* **Standard Deviation:** 1.348434

**Global Reactive Power (B)**

* **Arithmetic Mean:** 0.1374607
* **Geometric Mean:** 0.1554574
* **Mode:** 0
* **Standard Deviation:** 0.1275533

2. **Pearson’s Sample Correlation**

* **Cor(A, B)** = 0.2246845
* **Cor(A, C)** =-0.2617999
* **Cor(A, D)** = 0.7382876
* **Cor(B, C)** = -0.1096569
* **Cor(B, D)** = 0.3321679
* **Cor(C, D)** = -0.3483746