

Output:-

Linear Congruential Method:

```
(base) aryankushwaha@Aryan-Kushwaha Simulation % cd "/Users/Don't Open/5th Sem/Lab/Aaryan_28900/Simulation/Lab3/"
erGenerator && "/Users/Don't Open/5th Sem/Lab/Aaryan_28900/Simulation/Lab3/"LAB3RandomNumberGenerator

1.Mixed LCM
2.Multiplicative LCM
3.Additive LCM
4.Arithmetic LCM:
5.Exit

Select an option:1
Enter the number of random numbers to generate , seed x0 , a ,c,m:6 3 9 4 35
Random numbers are:
0.885714      0.0857143      0.885714      0.0857143      0.885714      0.0857143

Select an option:2
Enter the number of random numbers to generate , seed x0 , a ,m:5 65 2 23
Random numbers are:
0.652174      0.304348      0.608696      0.217391      0.434783

Select an option:3
Enter the number of random numbers to generate , seed x0 ,c,m:6 5 18 32
Random numbers are:
0.71875 0.28125 0.84375 0.40625 0.96875 0.53125

Select an option:4
Enter the number of random numbers to generate , x0,x1,m:5 12 13 43
Random numbers are:
0.581395      0.883721      0.465116      0.348837      0.813953

Select an option:5
(base) aryankushwaha@Aryan-Kushwaha Lab3 %
```

Output:

Electricity Simulation on System:

```
(base) aryankushwaha@Aryan-Kushwaha Simulation % cd "/Users/Don't Open/5th Sem/L
b4/" && g++ LAB4KCL-mathematical-dynamic-model.cpp -o LAB4K
CL-mathematical-dynamic-model && "/Users/Don't Open/5th Sem/Lab/Aryan_28900/Sim
tical-dynamic-model

Input three resistances values: 150 200 240

Input voltage : 280

i: 4.43333      i1: 1.86667      i2: 1.4 i3: 1.16667      eqi4.43333
i: 4.44917      i1: 1.87333      i2: 1.405      i3: 1.17083      eqi4.44917
i: 4.465        i1: 1.88        i2: 1.41      i3: 1.175      eqi4.465
i: 4.48083      i1: 1.88667      i2: 1.415      i3: 1.17917      eqi4.48083
i: 4.49667      i1: 1.89333      i2: 1.42      i3: 1.18333      eqi4.49667
```

Graph of Mathematical Dynamic Model (Krichoff's Law)

kirch22211

Total	Computer	Lighting	Refrigerator
4.433333	1.866667	1.400000	1.166667
4.449166	1.873333	1.405000	1.170833
4.465000	1.880000	1.410000	1.175000
4.480834	1.886667	1.415000	1.179167
4.496666	1.893333	1.420000	1.183333

