```
C:\Users\Kiran\PycharmProjects\RF_IM&Harmonics_Calculator\venv\Scripts\python.exe
C:/Users/Kiran/PycharmProjects/RF_IM&Harmonics_Calculator/RF_Spur_Calculator.py
Enter the first frequency in MHz
100
Enter the second frequency in MHz
200
Enter the third frequency in MHz
300
Enter the desired frequency(for hit calculation) MHz
600
Harmonics & IM Components for each Non-Linearity
--------------------------------------------------------------------------------
The 2nd Order Harmonic Freqs: [200, 400, 600]
The 2nd Order Inter-modulation Components:

No of hits : 0

 [100, 200, 300, 400, 500]
--------------------------------------------------------------------------------
The 3rd Order Harmonic Freqs: [300, 600, 900]
The 3rd Order  Inter-modulation Components:
(m,n,k): 1 1 1
(m,n,k): -1 -1 -1

No of hits : 2

 [0, 100, 200, 300, 400, 500, 600, 700, 800]
--------------------------------------------------------------------------------
The 4th Order Harmonic Freqs: [400, 800, 1200]
The 4th Order Inter-modulation Components:
(m,n,k): 3 0 1
(m,n,k): -3 0 -1
(m,n,k): 2 2 0
(m,n,k): -2 -2 0
(m,n,k): -1 2 1
(m,n,k): 1 -2 -1

No of hits : 6

 [0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100]
--------------------------------------------------------------------------------
The 5th Order Harmonic Freqs: [500, 1000, 1500]
The 5th Order Inter-modulation Components:
(m,n,k): 4 1 0
(m,n,k): -4 -1 0
(m,n,k): 1 1 -3
(m,n,k): -1 -1 3
(m,n,k): -2 1 2
(m,n,k): 2 -1 -2
(m,n,k): -2 1 -2
(m,n,k): 2 -1 2
```

No of hits : 8

[0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400]

The 6th Order Harmonic Freqs: [600, 1200, 1800]
The 6th Order Inter-modulation Components:
(m,n,k): 2 -4 0
(m,n,k): -2 4 0
(m,n,k): -3 0 3
(m,n,k): 3 0 -3
(m,n,k): 1 -2 3
(m,n,k): -1 2 -3
(m,n,k): 1 4 -1
(m,n,k): -1 -4 1

No of hits : 8

[0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700]

The 7th Order Harmonic Freqs: [700, 1400, 2100]
The 7th Order Inter-modulation Components:
(m,n,k): 0 3 -4
(m,n,k): 0 -3 4
(m,n,k): -3 3 1
(m,n,k): 3 -3 -1
(m,n,k): 3 3 -1
(m,n,k): -3 -3 1
(m,n,k): 5 -1 1
(m,n,k): -5 1 -1
(m,n,k): 1 -5 1
(m,n,k): -1 5 -1

No of hits : 10

[0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000]

--------- SUMMARY ----------

All Harmonic Freqs up-to 7th Non Linearity
[200, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1400, 1500, 1800, 2100]

All IM Freq Components up-to 7th Non Linearity
[0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000]

Total Hits at desired f due to Inter-Modulation: 34

Total Hits at desired f due to Harmonics: 3

Process finished with exit code 0