**Business Objective**

To maximize the sales of the company utilizing latest techniques.

**Business constraints**

Company being working with traditional approach, should have sufficient and accurate historical data to formulate various latest techniques. Company should be open to adapt to changing work environment.

**Data** **Dictionary** : myphonedata dataset consists of details of sales of mobile models : red, white, green, blue, yellow & orange in the binary format.

**Inferences**

On the basis of historical sales data of previous mobile models, we have come up with association rules, which will help in boosting the sales of new models. These rules can be understood by referring the attached csv file “Mobile\_rules.csv”.

First rule states that customers who like blue mobile models(Antecedents) like white mobile (Consequent) with the support of 0.3636 and confidence of 0.666 and a lift of 1.047, which illustrates white Mobile is 1.571 times more likely to be bought by the blue Mobile buyers as compared to the default likelihood of buying white mobile.

Second rule states that the red mobile (Antecedents) buyers will like the blue mobile (Consequent) too. Here Support is 0.3636, which states blue and red mobiles are bought 36 times out of 100 Transactions, Confidence of 0.666 suggests that out of all the transactions having red mobile sets 66% will have blue mobile sets too. Lift of 1.222 states red mobile is 1.222 times more likely to be bought with the blue mobile sets as compared to bought alone.

Third rule talks about orange & red mobile sets(Antecedent) & white mobile set(consequent), stating clearly white mobile buyers will be buying orange & red Mobile sets also, considering Support of 0.090, Confidence of 1 & Lift of 1.571.

**Plot Interpretations**

When Top11 itemsets are plotted against their support values, White mobiles are found to be most bought while red and blue stand at second position with the support values of 0.5454. Third position is held jointly by the mobilesets red & white, red & blue and blue & white with the support of 0.3636, making them third most bought mobilesets.

**Conclusion**

Mobile manufacturing company should follow the rules advised in the attached file ‘Mobiles\_rules.csv’ while working on the sales and distribution strategies with their Sales team.