**Group No: G16**

**Group Member:**

Mohd.Shoaib Nadaf (1328)

Shruti Thorat (1347)

**Topic: Customer Segmentation using K means Clustering using R**

**Abstract :**

Customer Segmentation can be a powerful means to identify unsatisfied customer needs. This technique can be used by companies to outperform the competition by developing uniquely appealing products and services.

Customer Segmentation is the subdivision of a market into discrete customer groups that share similar characteristics. Customer Segmentation can be a powerful means to identify unsatisfied customer needs. Using the above data companies can then outperform the competition by developing uniquely appealing products and services.

**The most common ways in which businesses segment their customer base are:**

1. **Demographic information**, such as gender, age, familial and marital status, income, education and occupation.
2. **Geographical information**, which differs depending on the scope of the company. For localized businesses, this info might pertain to specific towns or counties. For larger companies, it might mean a customer’s city, state, or even country of residence.
3. **Psychographics**, such as social class, lifestyle, and personality traits.
4. **Behavioural data**, such as spending and consumption habits, product/service usage, and desired benefits.

**Advantages of Customer Segmentation**

1. Develop customized marketing campaigns.
2. Design an optimal distribution strategy.
3. Prioritize new product development efforts.

**Solution:**

1. Recency, Frequency and Monetary Value Analysis (RFM).
2. Clustering K means (Unsupervised Learning)

**Software Requirement :**

* + RStudio
  + R
  + AWS S3
  + GitHub

**Hardware Requirement :**

* Processor : Intel i3-3gen
* Ram : 4-8 Gb